



## Global Pandemic and Its Effect on Papuan EFL Students' Digital Concepts

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**Abstract:** This study aims to reveal the influence of this pandemic on understanding digital concepts owned by native Papuan students who learn English, both indigenous and non-indigenous students. This study is categorized as a survey study. This study surveyed the EFL students' digital concepts during global pandemic. To attain the data, researchers distributed questionnaires to respondents. The questionnaires were distributed to 228 students in eastern Indonesia. The data analysis technique used in this study is a quantitative descriptive analysis. The results of this study indicate that, in general, the understanding of digital concepts of EFL students in eastern Indonesia is still below the average value. In demographic mapping based on indigenous students and non-indigenous students, there are no significant differences. Even in some aspects, indigenous students in terms of knowledge. Finally, in comparing the duration of playing games as an alternative to relieve stress during the pandemic, those who do not play games tend to have a lower understanding than those who intensely play games for more than 4 hours. The research findings can be a catalyst for future studies digital concept in the realm of learning.

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## Introduction

In February 2020, the Corona Virus spread to various parts of the world, not only in the epicenter of the Corona, Wuhan. Corona continues to have an impact on Indonesia and affects various living arrangements. Various fundamental aspects, such as industry and offices, have also experienced a decline in productivity due to the corona. It is also inevitable that the world of education is the foundation for preparing the next generation. The school community is forced to run an emergency system in the learning process. The online learning system is also applied to the plan to deal with the spread of the virus by lending computers to students at home and helping children without internet access get online (Shapiro, 2020). The rough condition of education in Indonesia in terms of infrastructure is also a barrier (Rahmawati et al., 2021). With limited infrastructure, facilities, and infrastructure that is not able to support it resulted in the closure of schools as a whole

Such school closures are leading to many challenges. For instance, not all schools have online learning systems, a situation that will likely contribute to learning setbacks. Additionally, these closures could affect students who depend on their schools for meals and impact parents who rely on schools for child care programs (Binkley, 2020). This stopped school activity also resulted in a decrease in the educational process experienced by students, and some schools were still able to run using available technological facilities so that learning was carried out online (Conceicao, 2021; Lim & Lee, 2021). Unfortunately, schools in eastern Indonesia, especially those located in villages, experienced massive obstacles. It was forcing them to stop the learning process on students completely (Haerazi, Utama, & Hidayatullah, 2020).



Even schools that run online learning processes cannot fully replace and optimize face-to-face learning. It is caused by many factors, including mastery of technology by the students themselves and the maximization of technology infusion in learning that the teacher has not fully mastered. The schools with the technology to provide online education can prevent students from falling behind academically. However, online programs can be implemented poorly (Morgan, 2015).

To maximize IT-based learning, ISTE offers standards for educators and identifies 14 critical elements for using technology for learning. Using these guidelines and the suggestions for remote learning published after the spread of the coronavirus will help teachers use this approach to learning to minimize the effects school closings can have on academic progress

For all students to benefit from online learning, they need to have reliable sources to get online. Unfortunately, a considerable number of households do not have internet access. In 2017, for instance, 14% of U.S. children between ages 6 and 17 lived without internet access at home (Salas et al., 2022). Most of them lived in households with incomes under \$50,000 per year (Goldberg, 2018). In Indonesia, internet users are still concentrated in the office area. As many as 72.41% of internet users in Indonesia are represented in urban areas and 49.5% in rural areas or villages. (Asosiasi Penyelenggara Jasa Internet Indonesia, 2020). The same source also found that internet users spread throughout Indonesia had the smallest percentage for the Papua region, only 2.5%. It impacts the learning process during this pandemic, where the initial conditions possessed by the Papuan population are still not familiar with the use of online learning.

This circumstance can make it difficult to implement online education to prevent students from falling behind. After many schools closed due to the Covid-19 epidemic, several districts had to pause their plans to provide online education due to equity concerns (Noonoo, 2020). The gaps that occur in online learning applications will also lead to the glaring of the existing gaps. An ideal learning condition occurs in Indonesia, where there are no striking gaps that can appear or be shown by each student in offline learning conditions (Rahmawati & Sujono, 2021; Rasmitadila et al., 2020). In online learning, gaps can be very conspicuous, for example, ownership of devices or gadgets that help students interact with teachers virtually (Conrad et al., 2022; Sari, 2012). An even more sad condition is that this gap is evident in the existing racial differences. Indigenous Papuans tend to have a low level of mastery compared to immigrants who occupy the Papuan territory (Yudiawan et al., 2021). Even most of them (Native Papuans) do not have devices or gadgets.

For example, Philadelphia's school district banned teachers from offering graded virtual instruction and requiring students to work remotely since this approach could not guarantee equal access to technology (Mezzacappa & Wolfman-Arent, 2020). As a comparison, the learning conditions in the Sota district, the border area between RI-PNG, the factors that encourage the use of technology in learning are still in the deficient categories. (Hermansyah & Sumarsono, 2021). It is undoubtedly different from the conditions in urban areas, where the factors that encourage students to take advantage of technology in the online learning process are relatively better than those in rural areas (Deng et al., 2022; Hodges, 2020). However, the government certainly does not give up on the problems that occur in this village area.

A strategic step similar to the steps taken by the Indonesian government is to keep Americans connected during the pandemic. Many telecommunications firms, such as AT&T and Comcast, made commitments to open Wi-Fi hotspots and not terminate service to customers who cannot pay their bills (Diaz, 2020). In contrast to Indonesia, primarily



targeting villages, the procurement of gadgets and devices to lend to students is one of the steps taken to overcome the problem of distance learning during this pandemic. However, unfortunately, this is not accompanied by an increase in students' digital competence, so some students have difficulty operating devices lent by the school.

With the availability of existing devices, it is needed that students will be able to manage and develop their abilities, especially in participating in the online learning process. However, other problems arise because increasing access to the internet does not guarantee equitable services to all students (M. Anderson & Perrin, 2018). It can be seen through the availability of infrastructure that supports the online learning process, and for example, rural areas tend to have unstable networks so that in the virtual two-way learning process, sometimes they experience obstacles such as being disconnected in the middle of learning. It certainly makes it difficult for teachers to manage the classroom during virtual learning (Lee, 2022).

In a pandemic situation, where students ultimately carry out the learning process at home, parents' role becomes vital in seeking effective learning. Once parents and teachers gain awareness of critical aspects of the program, teachers need to provide student-centered learning. ISTE considers this learning essential for creating the conditions needed for the technology to support learning (International Society for Technology in Education, 2019). Learning that should be directed to become student-centered becomes difficult to realize given the deficient level of student participation in learning (Nubani & Lee, 2022). This condition is motivated by the lack of emotional contact between students and teachers during the learning period. Learning is perceived only as a process of witnessing the teacher's explanation (Xu & Zhou, 2020; Haerazi, Utama, & Hidayatullah, 2020). The teacher has also made every effort to optimize students so that they can actively contribute to learning, but unfortunately, this is not responded to by students because many factors allow students not to be involved in learning, either by turning off the camera or the number of distractors that make it easier for students (Yan et al., 2022). To be diverted from the virtual meeting being conducted by the teacher.

Parents, in this case, play an essential role in controlling the ideal conditions for students to learn. Considering the restrictions imposed in this pandemic period, where many parents are being laid off from their work environment, it provides ample space for parents to interact with their children as students. The available interaction space is ideally used for parents to maximize communication and monitor their child's learning development. With the current conditions, the approach to delivering information and communication online has also changed. This approach to education occurs when students change roles from passively receiving information to actively participating in a process that emphasizes discovery. For example, instead of using technology to present information to students, teachers can provide them with opportunities to do projects, use digital tools to collect information and work with peers to create presentations as they share ideas (Chen, 2010).

Although assigning worksheets is tempting during school closure, online work should be as engaging as that students experience in class. Therefore, teachers should avoid assigning busy work and motivate students by communicating through live chats, virtual meetings, and video tutorials (Snelling & Fingal, 2020). Assigning too much independent work or complex projects requiring material not commonly available at home should be avoided. Instead, teachers should provide clear directions for short assignments similar to those they would assign at school (L. Anderson, 2020)

Being isolated at home can worsen the fear of dealing with a global pandemic in the psychological dimension. One strategy teachers and parents can use to alleviate this fear



involves having a cheerful disposition. Having such an attitude promotes mental and physical well-being (L. Anderson, 2020). Teachers also need to check on students regularly, especially those who are less skillful with digital tools (Snelling & Fingal, 2020). In its application, checking on feelings of worry or anxiety through media digital can profoundly affect success. During stressful times, heart and passion may be more important than the content needing to be covered. Perfection should not be expected. Instead, teachers should ask students about their academic progress and incorporate their feedback. Some valuable strategies include using recordings and reassuring students by phone (Tate, 2020).

Since most students are accustomed to seeing and hearing their teachers, video-based mini-lessons can dramatically change online instruction. Students tend to prefer lessons and demonstrations through videos created using mobile phone cameras or screen capturing software. Although videos by others may be beneficial, students enjoy those made by their teachers (L. Anderson, 2020). When teachers create their videos, they can also customize the content to ensure the appropriate rigor (Morgan, 2014).

Teachers need support as well. Many who are providing instruction remotely during the coronavirus pandemic are teaching entirely online for the first time. According to the National Center for Education Statistics data, only 21.1% of public schools offered at least one course entirely online in 2015-16 (Riser-Kositsky, 2019). In response to the pandemic, one principal provided ideas on practical approaches to teaching online by creating a Google folder that describes the virtual learning plans of schools in various regions of the world. These plans have helped educators new to online teaching stay updated on effective practices schools are using during the pandemic (Noonoo, 2020)

In their research, Helal and Banik (2020) reveal how students at the higher education level learn by using a hybrid model with a different percentage level of use of face-to-face classes and online activities. This research relies on how the face-to-face method is combined with the online method by negating the condition of students' ability to use digital devices and the digital literacy they have. Starkey (2020) In this study, the focus of research is directed at the teacher as a facilitator in learning, mainly exploring teachers' preparation in the digital era. This research is considered relevant because of the conceptualization of digital competencies proposed in this study, and the digital competencies include; Generic Digital Competence, Integration into Practice, and Professional Digital Competence. In contrast to this research in the teacher dimension, this study explores how students who are influenced by the three supporting aspects of digital competence built by teachers can have mastery of technology after the pandemic period reaches the post-pandemic point. Oleksiyenko (2021) This study aims to reveal various concepts that emerged during the post-pandemic period, including the learning process that was felt unequal. This inequality arises because some of them who are lovers of this blended-based learning process will significantly benefit from reaching a much larger number of audiences due to the forced conditions that occurred during the pandemic.

In contrast to several previous studies that looked at the dimensions of application to find effective alternatives in overcoming problems that arise during distance learning, this study explores the fundamental aspects of distance learning that involve technology primarily in areas that still rarely use technology as part of their daily lives. Focusing on the Digital Competencies possessed by students is expected to provide a new knowledge base for practitioners in implementing or implementing learning following the initial abilities possessed by these students.



## Research Method

This study is a survey study with using descriptive quantitative analysis (Cohen, Manion, & Morrison, 2018). It was conducted at the end of 2020 involving 228 students in eastern Indonesia. This study was conducted using a questionnaire adapted from previous research exploring various aspects of students' digital competence. In the distribution of student demographic data, researchers took the gender aspect, namely male and female, to see the level of influence rather than gender on the digital competencies possessed by students. For the students' background of the majors, the researchers focused the data on two main poles in the concentration of majors taken by students, namely exact and non-exact. The next focus and unique in this research is the element of ethnic occupation, or those who are native Papuan students and those who are immigrants. This data was taken to provide readers and other researchers an overview of the differences or gaps between native Papuan students and immigrants.

Furthermore, the element of time playing games, playing games in this digital era has become a prevalent thing found in the younger generation today, in doing so researchers took data in this element to see how much influence the time playing games had on students and their influence on competence digital owned by the student. In addition to playing games, researchers also measured using social media on students' digital competence. It is based on the conditions of social interaction that exist in this digital era, where communication can occur indirectly or through various digital devices used in their daily lives.

The distribution in areas that tend to have a high level of digital literacy is undoubtedly different. In exploring the digital concepts, the researcher explores the basic understanding of students' knowledge of various aspects and digital concepts spread across various platforms. From the results of distributing questionnaires for two months, the researchers then conducted an analysis by grouping based on demographics. From the grouping results, the researchers displayed using tables to see the shape of the distribution of the data obtained. Next, an analysis was carried out by looking at the data in numbers from the scale determined on the questionnaire. In the final stage, conclusions are drawn (Cohen, Manion, & Morrison, 2018).

## Results and Discussion

The questionnaires were distributed and filled out by 228 participants with a distribution of 75.5% of the respondents were women, and 24.5 were men. The low awareness of the community influences the high participation of women in this questionnaire, even students themselves to participate in or fill out a research questionnaire, but women have a higher level of awareness to participate in filling out a research questionnaire. Furthermore, the participation from non-exact majors was 61.6%, and 38.4% were those from the exacts department. Results show that only 18.8% reached those who are native Papuans. Their low literacy skills may cause it. Meanwhile, 81.2% are survey respondents who are students who are not native Papuans.

For further mapping in the questionnaire distributed, the researchers divided into surveys of student activities by playing games, using social media, and population status, which were used as a benchmark for researchers in collecting information for those who came from outside Papua to study not living in Papua. 50.7% of respondents in this research are those who do not play games, and this is quite interesting considering the level of engagement rather than games on student life is very high many of them spend quite a lot of time playing games, but for areas East Indonesia like in Merauke, young people do not spend

enough time playing games. 35.8% played games for about 1-2 hours, 7.9% played for 2-3 hours, and 5.7% for more than 4 hours.

In terms of the use of social media, this is inversely proportional to playing games, many of the students feel that social media is an inseparable part of their activities, but the intensity of the use of social media is the thing that is mapped in this study. A total of 44.5% use social media for more than 4 hours, 21.4% use social media in 2-4 hours, and 34.1% use social media in the range of 1-2 hours. In domicile data, 19.7% of those come to eastern Indonesia or, to be precise, in Merauke to study, and the rest are students who have lived in the Merauke area since childhood or more than two years before studying.

**Table 1. Mean on Digital Concept**

Aspect	Mean	Std	Min	Max
Information and Communication Technology	6,45	2,07	1	10
Technological Learning & Knowledge	6,31	2,03	1	10
Technological Strength & Participation	5,74	2,10	1	10
Web 2.0	4,75	2,46	1	10
Web 3.0	4,55	2,37	1	10
Wikipedia	5,22	2,41	1	10
Blogsphere	4,24	2,40	1	10
Podcast	4,30	2,54	1	10
Social Bookmarking	4,22	2,38	1	10
Web Syndication	3,83	2,40	1	10
Mashup	3,89	2,36	1	10
Learning Object	4,71	2,52	1	10
E-Learning	5,75	2,57	1	10
M-Learning	4,49	2,50	1	10
B-Learning	4,28	2,48	1	10
Cloud Storage	4,14	2,57	1	10
Virtual Reality	4,37	2,61	1	10
Augmented Reality	4,60	2,64	1	10
Copyleft	4,12	2,47	1	10
Creative Common Licence	4,19	2,50	1	10
Pemetaan Digital	3,91	2,40	1	10
E-exclusion	4,45	2,37	1	10
I-inclusion	3,65	2,29	1	10
Literasi Digital	3,57	2,27	1	10
Cyberactivism	4,50	2,59	1	10
E-participation	3,93	2,42	1	10
Empowerment	4,06	2,44	1	10

The table above describes students' understanding of digital concepts that exist at this time. Students tend to over-value themselves so that the data obtained also meet a reasonably high value, but it can be seen the difference between concepts that are known and unknown to students. In the presentation in this discussion section, the researcher divides the categories with good mastery on a scale above 5. Then the researcher categorizes low mastery on a scale below 5. It is based on the high self-assessment given by students.

In the category of good understanding, several concepts are included, including E-Learning, Wikipedia, Strengthening and participating in technology, learning, knowledge of technology, information and communication technology. Among all the concepts in the excellent understanding category, ICT has the highest score and is the most familiar among students because the concept of ICT has been campaigned for a long time by the Ministry of Communication and Information. In line with ICT, several other components support the successful understanding of the ICT concept itself, namely the strengthening and participation of technology and learning and knowledge of technology (Zhong, 2009). These

two components are supplement components whose job is to encourage the successful implementation of ICT in the community.

Implementing ICT in the community will significantly encourage people to manage their daily activities and use ICT (Conrad et al., 2022). Unfortunately, this is not realized evenly in the territory of Indonesia. An example is the eastern tip of Indonesia which has a weakness in infrastructure. In the past, people in eastern Indonesia struggled to obtain information. However, now, along with implementing the palapa ring in Indonesia, which allows each region to have the same bandwidth in accessing the internet, it opens up the most comprehensive possible space for the public to process information, producing and consuming information.

Mastery of ICT is also closely related to digital literacy, where mastery of ICT will significantly open up space for information to reach individuals, but the readiness of the individual's ability to manage this information will be very decisive. An informant will disseminate information with a definite purpose, but unfortunately, not everyone can become a credible informant, nor is an information absorber. Not everyone can have a good filter in filtering the information that enters and is managed by the individual. The rise of the spread of hoaxes is also influenced by the low digital literacy of the community. It is regrettable considering that other nations have gone far ahead. However, the inequality at the beginning, both in terms of infrastructure and human resources, resulted in obstacles in processing information correctly and adequately, thus encouraging the spread of hoax news.

### **Papuan & Non-Papuan**

To investigate the indigenous people of Papua, researchers build demographics based on ethnic backgrounds. The following is a table that shows the comparison between understanding digital concepts in Papuan and non-Papuan native students.

**Table 2. Papuan and Non-Papuan Comparison**

<b>Aspect</b>	<b>Papua</b>	<b>Non-Papua</b>
Information and Communication Technology	6	6,5
Technological Learning & Knowledge	6,1	6,4
Technological Strength & Participation	5,4	5,8
Web 2.0	4,8	4,7
Web 3.0	4,6	4,5
Wikipedia	4,9	5,2
Blogsphere	4,1	4,3
Podcast	4,1	4,3
Social Bookmarking	4,2	4,2
Web Syndication	4,2	3,7
Mashup	4,1	3,8
Learning Object	4,8	4,7
E-Learning	4,9	6
M-Learning	4,3	4,5
B-Learning	4,3	4,3
Cloud Storage	4,5	4,1
Virtual Reality	4,1	4,4
Augmented Reality	4,3	4,7
Copleft	4,3	4,1
Creative Common Licence	4,5	4,1
Digital Mapping	3,9	3,9
E-exclusion	4,2	4,5
I-inclusion	3,9	3,6
Literasi Digital	3,7	3,5
Cyberactivism	4,1	4,6

Aspect	Papua	Non-Papua
E-participation	3,8	3,9
Empowerment	3,8	4,1

Based on the results above, it can be seen that there is no significant difference in understanding digital concepts between Papuan and non-Papuan students. Stereotypes that arise about the weak understanding of native Papuan students regarding digital concepts can be refuted through the data presented here. However, of course, there is a need for further investigation of the realization of conceptual understanding on the ability of native Papuan students to use digital devices. Some aspects that can be seen as advantages of native Papuan students in terms of digital concepts are the concept of digital literacy, I-inclusion, Creative Common License, Copyleft, Cloud Storage, Learning Object, Mashup, Web Syndication, Web 2.0, and 3.0. no specificity emerges from the striking concept in the results described above, but of course, further investigation is needed.

The negative stereotype of backwardness that occurs primarily in the eastern region of Indonesia does not only occur in Papuan natives, and some regions also experience this. Rahardjo (2018) states the media literacy observation indicates that the community does not become entirely exclusive to digital media exposures while still maintaining its cultural values. The development of digital media and the ongoing pandemic Global also encourages and influences the exposure of digital devices to society (Haerazi, Utama, & Hidayatullah, 2020). Likewise, distance learning during this pandemic can provide a considerable boost and encouragement to the public to gain exposure to digital media and devices.

### Playing Game Duration

Playing games is one of the activities that can be done by many people as long as they have to stay indoors from the covid 19 pandemic. Games that are part of positive technology, if applied in the right strategy and way during this pandemic, can be a boost for one's productivity as well as for others, self-potential development in developing digital skills (Riva, Mantovani, & Wiederhold, 2020).

In this study, researchers used the duration of playing games to see the impact on mastering digital concepts. The table below describes the representation of mastery of digital concepts through the average score with a mean:

**Table 3. Playing Game Duration Mean**

Aspect	Playing Game Duration			
	0 Hour	1-2 Hours	2-4 Hours	More Than 4 Hours
Information and Communication Technology	6,22	6,77	6,28	6,77
Technological Learning & Knowledge	6,11	6,49	6,50	6,77
Technological Strength & Participation	5,56	5,90	5,72	6,38
Web 2.0	4,41	5,04	5,22	5,38
Web 3.0	4,36	4,73	4,50	5,15
Wikipedia	5,06	5,32	5,17	6,08
Blogsphere	4,19	4,37	3,72	4,62
Podcast	3,91	4,67	4,50	5,23
Social Bookmarking	4,03	4,50	3,56	5,00
Web Syndication	3,69	4,11	3,06	4,38
Mashup	3,77	4,13	3,50	4,00
Learning Object	4,65	4,99	3,61	5,08
E-Learning	5,52	6,12	4,83	6,77
M-Learning	4,15	5,09	3,72	4,92
B-Learning	4,02	4,79	3,50	4,38
MOOC	3,97	4,57	3,11	4,31
Cloud Storage	3,85	4,90	4,39	5,62
Virtual Reality	4,28	4,85	4,56	6,00



Augmented Reality	3,95	4,45	3,72	4,08
Copyleft	4,13	4,35	3,89	4,08
Creative Common Licence	3,80	4,17	3,50	3,77
Digital Mapping	4,36	4,73	3,72	4,54
E-exclusion	3,55	3,95	3,33	3,08
I-inclusion	3,52	3,85	2,94	3,15
Literasi Digital	4,44	4,78	3,61	4,54
Cyberactivism	3,80	4,10	3,56	4,62
E-participation	3,88	4,43	3,22	4,46
Empowerment	3,69	3,91	2,89	3,69

The table above shows that there is a pattern formed on the distribution of the mean. The pattern formed is undoubtedly influenced by various factors, which are studied from this research. The pattern emerges that many of those who do not play games have lower knowledge of digital concepts. Students showed that they realized the ICT improvement that can be utilized in learning processes (Van Rooji et al., 2011). It can be caused by low exposure to technology or low screen time or time in front of the monitor screen. Those who spend time in the low range, 1-2 hours a day playing games tend to have a higher understanding of digital concepts than those who do not play games at all in their daily lives. Due to this, play game can be positive effect and negative effect for students (Zhong, 2009; Jang & Ryu, 2011; Tang & Fox, 2016; Wei et al., 2017). What makes this data interesting is the decline in those who play. Games work on low 2-4 hours. It requires further investigation to ascertain the causes and implications for mastering the concept of digital and digital devices (Xu & Zhou, 2020). However, the peak point found in mastering digital concepts in this study was those who played games with a duration of more than 4 hours. It is undoubtedly in line with those who often use digital media or devices and understand digital concepts.

These results also show that the pandemic does not significantly affect playing the game itself. Some who do not like to spend their time playing games tend to distract themselves with other things away from playing games (Jong, 2015; Viviyapong & Sookpam, 2019). Indeed, games are like coins that have two sides. Because gaming can be used to cope with the psychological stress from the outbreak, mental health professionals should be aware of how increased gaming during the pandemic may contribute to the risk of gaming disorder, especially if the pandemic persists (Ko & Yen, 2020). It needs to be a serious concern for all people who want to distance themselves from the generation exposed to very long screen time due to daily life.

## Conclusion

Based on the research findings, the Papuan EFL students' digital concepts refer to the use of various technology devices in different contexts, including E-Learning, Wikipedia, Strengthening and participating in technology, learning, knowledge of technology, information and communication technology. Among all the concepts in the excellent understanding category, ICT has the highest one and is the most familiar among students because the concept of ICT has been campaigned for a long time by the Ministry of Communication and Information. In line with ICT, several other components support the successful understanding of the ICT concept itself, namely the strengthening and participation of technology and learning and knowledge of technology. These two components are supplement components whose job is to encourage the successful implementation of ICT in the community. This study also showed that equity in eastern education is an effort that is continuously encouraged by the government. Many factors certainly influence the success of this equity. Some aspects that can be seen as advantages of



native Papuan students in terms of digital concepts are the concept of digital literacy, I-inclusion, Creative Common License, Copyleft, Cloud Storage, Learning Object, Mashup, Web Syndication, Web 2.0, and 3.0. no specificity emerges from the striking concept in the results described above, but of course, further investigation is needed.

During this pandemic, of course, stress levels are one component that continues to rise as long as people have to lock themselves in the house. Playing games is sometimes considered one of the most effective alternatives in reducing stress levels. This study also proves that those with the intensity of playing games more than 4 hours a day have a high level of mastery of digital concepts than those who do not play games. It is like a double-edged sword where on the one hand, playing games can stimulate understanding of digital concepts, but on the other hand, increasing screen time can plunge the next generation into a significant increase in the number of people with myopia during this pandemic.

### Recommendation

This survey has provided evidence on Papuan students' digital concepts during pandemic in which most students did not become entirely exclusive to digital media exposures while still maintaining its cultural values. The development of digital media and the ongoing pandemic Global also encourages and influences the exposure of digital devices to society. Due to this situation, it is certainly not used as a form of exposure to weaknesses but as reference material for policy interventions in education during this pandemic. To reach this point, of course, it requires the efforts and involvement of many parties, especially in the scope of human resources. Negative stereotypes against native Papuan students are refuted through the results of this study. This study provides an overview of the competitiveness potential that native Papuan students also own. Of course, further research is needed to investigate the weak points and obstacles experienced by native Papuan students in moving forward, especially during this pandemic. It will undoubtedly have a significant impact in encouraging advanced Papuan human resources

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