Analysis of the Covid-19 Learning Process and Knowledge Integration in the Education Unit

Nurmalahayati[1*], Aja Salmiati[1], Bazelia Izasatifa[1]

[1] Chemistry education study program, Universitas Islam Negeri Ar-raniry, Banda Aceh, Indonesia

Abstract: The research aims to find out information about the learning process and the integration of COVID-19 knowledge in education units in Aceh Barat Daya. Based on the results obtained showed that the learning systems that are generally applied during the pandemic are blended learning with a percentage of 42.9%, offline learning 28.6% and online learning 28.6%. Face-to-face learning is carried out through the division of study groups, while online learning is carried out by utilizing learning applications. The education unit at Aceh Barat Daya has tried to implement the policies of the central government and local governments while carrying out learning during the pandemic. This can be observed from the efforts of the school in implementing health protocols while studying during the pandemic. In addition, the school also provides free health facilities and infrastructure and free internet quota to support the learning process. Education related to the dangers of *coronavirus is* carried out by the school in various ways, both by socializing the dangers of COVID-19 in the school and by giving direction for teachers to exemplify COVID-19 prevention behavior. Education is also carried out by making disinfectants independently and sharing information about covid-19 through social media.

Keywords: Learning process; Curiculum integration; Covid-19

Citation: Nurmalahayati, N., Salmiati, A., & Izasatifa, B. (2022). Analysis of the Covid-19 Learning Process and Knowledge Integration in the Education Unit. *Jurnal Penelitian Pendidikan IPA*, *8*(1), 140–146. https://doi.org/10.29303/jppipa.v8i1.1049

Introduction

Indonesia and most countries around the world are currently being hit by an outbreak of the corona virus disease or covid-19. In Indonesia, the COVID-19 virus began to spread in December 2019. Based on information obtained from data from the Covid-19 acceleration task force, there were 1,803,361 positive cases of corona virus disease 2019 or covid-19 with a death toll of 50,100 people as of May 28, 2021.

The COVID-19 pandemic that is now endemic has had quite a real impact on various sectors of life. Various policy changes as a result of the corona virus pandemic also affect aspects of education in Indonesia. Based on the SE KEMENDIKBUD of the Republic of Indonesia Number 03 of 2020 concerning the prevention of covid-19 in education units, all education units in Indonesia are required to carry out teaching and learning activities from home to assist the government in promoting social distancing and avoiding crowds, associations and gatherings that can include people in large numbers as an effort to reduce cases of the spread of covid-19 (Yuliati, et al. 2020).

The covid-19 pandemic requires all levels of education from elementary school to college to carry out learning from home because during the covid-19 era face-to-face learning is temporarily abolished in order to reduce virus transmission. (Purwanto, et al., 2020). During the covid-19 era, online learning can be a way out to continue learning activities. Online learning demands the teacher's role in evaluating effectiveness and synchronized with learning needs. It is important to do this in order to fulfill learning variables such as

_____
*Email: nurmalahayati@ar-raniry.ac.id

knowledge process, moral and skill aspects, intelligence and aesthetics. (Heliandry, et al. 2020).

The impact of the COVID-19 pandemic has also affected the learning system in education units in Southwest Aceh. Where as many as 193 education units consisting of 130 Elementary Schools, 39 Junior High Schools, 19 Senior High Schools and as many as 5 Vocational High Schools spread across nine Districts in Southwest Aceh were affected by the 2019 Corona virus disease pandemic. This is felt by approximately 15,307 students who are studying in elementary school, 1,116 students from junior high school and approximately 5,859 students who are pursuing senior secondary education also have to adapt while participating in learning during the corona virus pandemic.

Southwest Aceh Regency is included in the list of yellow zones for the risk zoning of the corona virus disease 2019 (Covid-19) area. On August 24, 2020, the Southwest Aceh Regent issued Instruction Letter Number 423 of 2020 regarding the implementation of face-to-face learning in educational units within the Southwest Aceh district government for the 2020/2021 academic year. Based on the instruction letter, it was stated that face-to-face learning was carried out guided by the laws and regulations, the implementation of learning by prioritizing school readiness in accordance with strict and monitored health protocols by cultivating a clean and healthy lifestyle in the context of overcoming and preventing COVID-19. The District Head of Aceh Barat Daya also instructed to temporarily close schools that do not implement health protocols and do not cultivate a clean and healthy lifestyle.

The education unit in Aceh Barat Daya has implemented the policies set by the local government. The policy issued by the local government regarding learning in the era of the COVID-19 pandemic is carried out to suppress the increasing spread of COVID-19. This research is useful for knowing the impact of covid-19 on learning and aims to analyze government policies in responding to covid-19 and its relation to the concept of education in education units in Southwest Aceh during the covid-19 pandemic.

In the era of the covid-19 pandemic, the most important thing that needs to be considered is that teachers must be able to ensure that teaching and learning activities continue even though students are not in the classroom. Educators are considered necessary to design and implement learning innovations by increasing the use of existing media such as online media. (Haryati, Sukarno. 2021). Comprehensive human resources are a priority in educational innovation in the presence or absence of a pandemic. Another thing that is needed is a response to be able to adapt according to circumstances and must be balanced with government policies that are

proportional to developments and innovations in learning both during the pandemic or the New Normal period. The important thing is that the collaboration between human resources, technology and policies will be a great synergy in building a civilized Indonesian education. (Ansori & Fitriyadi Sari, 2020).

The government also continues to try to contain the spread of COVID-19 through several policies that have been issued by both the central government and regional governments. However, the lack of knowledge about COVID-19 and the lack of public awareness are the causes of the increase in Covid-19. Therefore, there is a need for educational efforts to increase public understanding and awareness of health protocols in handling COVID-19. (Nurhadi, et al. 2020).

The World Health Organization (WHO) states that maintaining body hygiene, either by getting used to washing hands using soap or hand sanitizer and not touching the eyes, nose and mouth, is necessary to prevent the spread of COVID-19. In addition, social distancing is a priority in suppressing COVID-19 cases. Health facilities need to be prepared as optimally as possible. Disaster education activities must be carried out comprehensively, adaptively and repeatedly so that the educational substance can be internalized by students and educators. Disaster education is a solution that can be applied by schools as an effort to reduce the impact of disasters and familiarize students and educators to be responsive to disasters that occur. In the education unit, it is very urgent to implement disaster impact reduction education. Proper management of epidemic disasters in the school environment can minimize the impact of a greater risk. (Yudiawan, et al., 2020).

In order to fulfill the right to education during the Covid-19 period, the Minister of Education and Culture also issued an emergency curriculum as a learning guide. The emergency curriculum of the covid-19 era is a simplification of basic competencies that refers to the 2013 curriculum. The emergency curriculum is used to reduce the burden on teachers in fulfilling the 2013 curriculum. The emergency curriculum is designed with the health and safety of students in mind. In the emergency curriculum the number of learning materials in each subject is reduced, this is where the difference lies with the national curriculum. The emergency curriculum can fulfill the education rights of the Indonesian people if all parties contribute to the implementation of the curriculum (Rastini, et al., 2020).

Efforts that can be made in schools in order to prepare for the application of adaptation of new habits include health promotion, provision of health facilities and infrastructure, ToT for educators for health behavior. Advocacy activities carried out with school

principals have shaped positive perceptions and commitments of policy holders to pay great attention to the Covid-19 problem. (Maryati, et al., 2021).

The objectives to be achieved from this research are (1) obtaining information about the system of teaching and learning activities implemented during the covid-19 pandemic (2) obtaining an overview of the efforts made by educational units in Southwest Aceh in implementing policies of central and regional orders during the learning period during the pandemic and (3) knowing how to integrate education related to the covid-19 pandemic in the school curriculum.

Method

This type of research is quantitative. Data collection procedures and techniques used with a quantitative approach, namely Field Research (field research) with the questionnaire method. Questionnaire method is a research instrument using a set of questions that are arranged to be submitted to respondents. This questionnaire aims to obtain written data from the respondents to be set as a sample (Rukajat, 2018).

This research was conducted at three senior high schools in Southwest Aceh, namely MAN Aceh Barat Daya, SMAN Superior Harapan Persada and SMAN 5 Aceh Barat Daya. Overall respondents in this study consisted of 60 students and 6 teachers, or consisted of 20 students and 2 chemistry teachers from each school. Data collection techniques in this study were carried out by distributing questionnaires to students and teachers in the education unit. This questionnaire is distributed online via the google form link. The use of the questionnaire instrument aims to obtain information from students and teachers regarding the learning system implemented during the COVID-19 pandemic, obtain an overview of the efforts made by Southwest Aceh education units in implementing central and regional command policies during the pandemic period learning and find out how integration of education related to the COVID-19 pandemic in the school curriculum.

Result and Discussion

Learning system in the midst of the covid-19 pandemic

The learning system applied during the Corona Virus Disease 2019 pandemic is certainly different from the learning system applied in the pre-pandemic period. The Southwest Aceh district government in order to follow up on the policies of the government of the Republic of Indonesia, issued a policy through the Southwest Aceh Regent's Instruction Letter Number

423 of 2020 regarding face-to-face learning in education units within the Southwest Aceh district government for the 2020/2021 school year. The following is an overview of the learning system during the pandemic in Southwest Aceh.
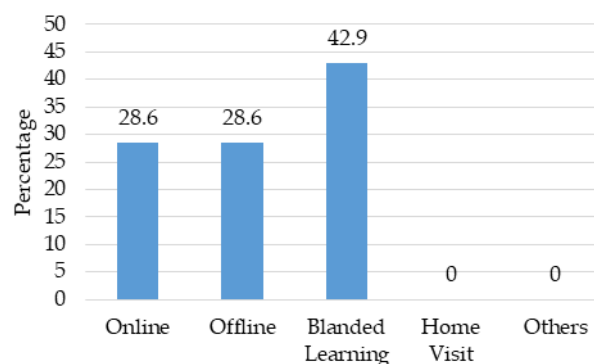

Figure 1. The learning system of the Covid-19 era

The information obtained from the data above shows that the most widely applied learning system during the 2019 corona virus disease pandemic is Blended Learning. Blended Learning refers to learning that combines or combines online learning and offline or face-to-face learning (Nurhadi, 2020). In addition to blended learning, during the COVID-19 pandemic, schools at ABDYA also implemented offline learning and online learning.

Face-to-face learning is only applied to students who have permission from their guardians. The implementation of face-to-face learning is carried out through the formation of study groups (turned learning system). Regarding the implementation of subjects that require experiments or practicum, some schools at ABDYA choose not to carry out practicum activities during pandemic learning while others choose to carry out online practicums through observing practicum videos provided by the teacher. Based on the observational data, it can also be seen that as many as 17.6% chose to carry out the practicum offline. Regarding the implementation of semester exams, most schools carry out online exams with a percentage of 66.7%, while the rest carry out semester exams in the classroom and homework.

While online learning is carried out by utilizing online media platforms, especially WhatsApp Group, Google Classroom and independent applications that have been developed by the school. The results of this study are also in line with previous research by Kristina, (2020) which states that the majority of teachers and students use the WhatsApp application to support online learning, then the Google Classroom application and other applications.

However, most teachers think that online learning is difficult to implement. This is due to several obstacles experienced by educators during teaching during the COVID-19 pandemic. Figure 2. shows the percentage of obstacles experienced by teachers during teaching during the pandemic.
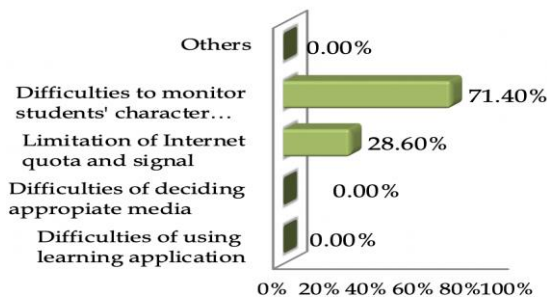

Figure 2. Obstacles in implementing learning during the pandemic experienced by teachers

Based on the data obtained from observations, it can be seen that most teachers have difficulty monitoring the character and behavior of students, and other factors because they are often constrained by internet signals and quotas. Not only teachers, students also have to face several obstacles when participating in the learning process during the pandemic, which is shown in Figure 3.
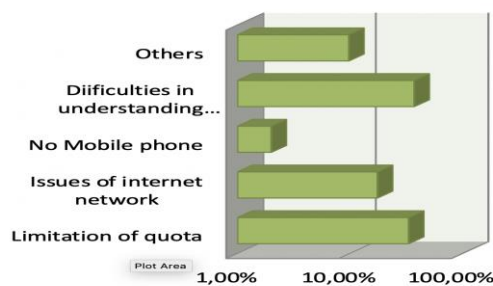

Figure 3. Percentage of obstacles in implementing learning during the pandemic experienced by students

Figure 3. shows that the majority of students have difficulty understanding learning materials during the covid-19 pandemic. While some others have the same problems as experienced by educators, namely limited quotas and constrained internet network. Previous research by (Sadikin, et al) also stated that several obstacles in implementing learning in the Covid-19 pandemic era included educators not being able to supervise student activities directly, on the other hand students also had difficulty understanding lecture material given online and signal constraints were something that commonplace when learning online.

In addition to the information above, it is also known that based on observational data, as many as 57.1% of teachers stated that the interaction between teachers and educators during the learning period during the pandemic went quite well, and 28.6% of teachers stated that it was lacking. Regarding student interest and interest in learning to take part in online learning, as many as 71.4% of teachers think that some students are less interested in participating in online learning.

The Efforts of Education Units in Southwest Aceh in Implementing Central and Regional Government Policies During the Learning Period of the Covid-19 Pandemic.

The following are some policies issued by the central and regional governments in the context of handling COVID-19 cases in relation to the education sector.

Table 1. Policies for implementing learning in the Covid-19 era

Regulation	About
- Joint Decree of the Minister of Education and Culture, Minister of Religion, Minister of Health and Minister of Home Affairs of the Republic of Indonesia NUMBER 03/KB/2021, NUMBER 384 YEAR 2021, NUMBER HK.01. 08/Menkes/4242/2021, NUMBER 440-717 YEAR 2021 Regarding Guidelines for the Implementation of Learning During the Corona Virus Disease 2019 (covid-19) Pandemic.	- Learning in the Covid-19 era is carried out with the provisions that educational units located in the green zone can conduct face-to-face learning while those in the orange and red zones are prohibited from conducting face-to-face learning processes. Face-to-face learning is carried out. Maintain a minimum distance of 1.5 meters and a maximum of 18 people per class. and carried out with the division of study groups. Implementing mandatory behavior during the pandemic, namely using masks, washing hands with soap, maintaining distance, and applying coughing and sneezing etiquette. Disinfecting the facilities and infrastructure and the environment of the education unit. and ensure the availability of health facilities and infrastructure during the COVID-19 pandemic.

Regulation	About
- Ministry of Education and Culture Circular Letter Number 15 of 2020 concerning Guidelines for Organizing Learning from Home in an Emergency Period for the Spread of Corona Virus Disease (covid 19). May 18, 2020 - Southwest Aceh Regent Instruction Number 423 of 2020 concerning the Implementation of Home Teaching and Learning Activities at the level of Early Childhood Education (PAUD), Kindergarten (TK), Elementary Education (SD), Middle School (SMP/MTs), and Middle School Upper (SMA/MA/SMK). August 22, 2020	- Learning from home during the COVID-19 outbreak is carried out while still paying attention to the protocol for handling COVID-19 and learning from home through online and/or offline distance learning is carried out in accordance with the guidelines for organizing learning from home. - Asking educators to give homework assignments to students through online media or other media. Further face-to-face learning is still guided by laws and regulations, especially the four ministerial decrees by prioritizing school readiness in accordance with strict and monitored health protocols by cultivating clean and healthy living in the context of preventing and controlling COVID-19.

The above policy is a learning procedure that education units must comply with while carrying out learning during the COVID-19 pandemic era. The following is an illustration of the efforts of educational units in implementing government policies during the learning period of the COVID-19 pandemic, which is presented in Figure 4.
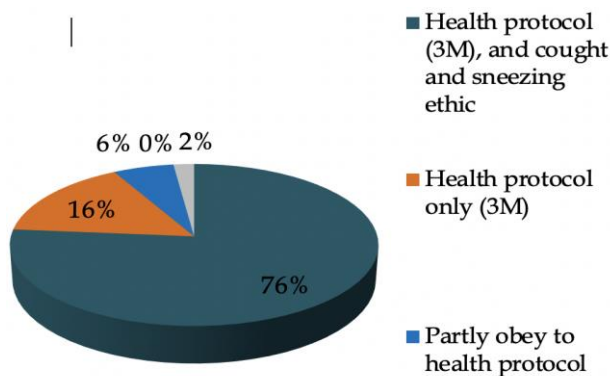

Figure 4. Mandatory behavior during the pandemic

Based on the data above, it can be seen that schools in Southwest Aceh have tried to implement policies that have been issued by the central government by complying with health protocols during the Covid-19 learning period, where it can be seen that most school residents have implemented 3M behaviors, namely maintaining distance, wearing masks, and wash hands and apply cough and sneeze etiquette while carrying out teaching and learning activities during the pandemic.

In addition, as many as 52.9% of students stated that class conditions when carrying out face-to-face learning activities were required to maintain a minimum distance of 1.5 meters and a maximum of 18 students for one class. Schools also disinfect school facilities and infrastructure before and after learning

begins. Not only that, the school always gives repeated and intensive announcements regarding the use of masks, washing hands with soap with running water and keeping a distance to all school residents. And as many as 57.1% of respondents stated that schools also provide facilities and infrastructure for learning during the pandemic in the form of providing free masks to school residents. To prevent crowds, schools in Aceh Barat Daya divide the hours of entry, break, and exit (home hours) for all study groups. Before starting learning, the school requires every school member to check body temperature, this can be observed from the student's response with a percentage of 60.8%. Schools also provide health assistance services within the school environment in the form of medicines and first aid kits, but schools have not provided special personnel for COVID-19 services.

In addition to offline learning, some schools in ABDYA also carry out online teaching and learning activities. One of the obstacles when carrying out online learning is the limited quota. To overcome these obstacles, schools (government) have attempted to provide internet quotas for educators and students during online learning, although the quota provided is still limited.

Integration of Education Related to the Covid-19 Pandemic in the Curriculum of Education Units in Southwest Aceh.

Various efforts have been made by the school to minimize the spread of COVID-19. One of them is through educational activities for the COVID-19 pandemic to every school member. Minimizing the impact of disasters and familiarizing the community with learning to be alert and responsive to disasters that occur can be done through disaster education. Several forms of disaster education include community-based disaster management, disaster education to create disaster awareness communities and local wisdom in disaster management (Setyowati, 2019). Based on the information obtained from the research results, it shows that most schools consider that education and health promotion are important to

do to increase the understanding of school residents regarding the dangers of covid-19. Educational activities from the school are carried out in the manner shown in Figure 5.
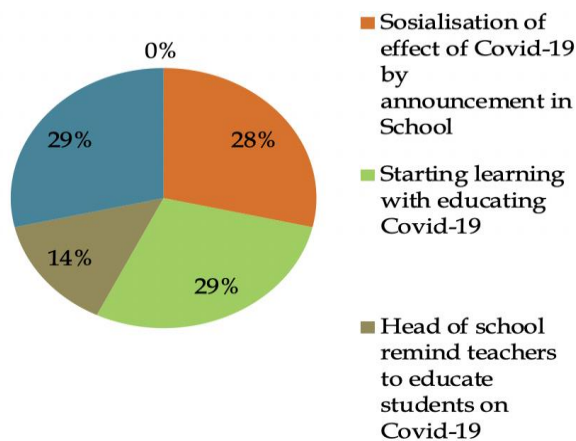

Figure 5. Percentage of educational methods for the Covid-19 pandemic

Figure 5. shows that the way educators educate about the covid-19 pandemic is by socializing the dangers of covid-19 through announcements in the school environment, teachers start learning by providing education related to the dangers of covid-19, and exemplifying covid-19 prevention behavior, besides the principal He also always reminds teachers to inform students about the dangers of Covid-19. However, the implementation of COVID-19 pandemic education also has several obstacles in its implementation. Figure 6. shows the percentage of some of the obstacles faced by schools in educating the covid-19 pandemic.
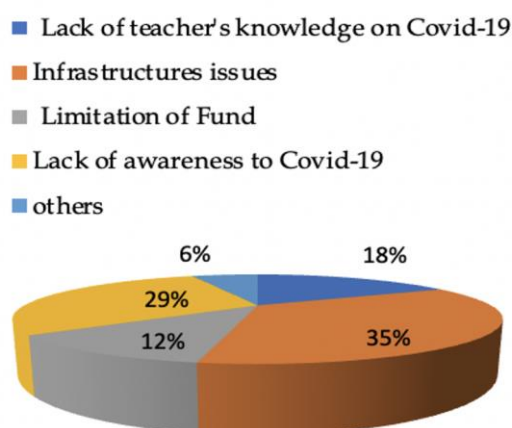

Figure 6. Percentage of obstacles to the implementation of Covid-19 education in the school environment

Figure 6. shows that the main obstacle is the procurement of facilities and infrastructure for the

prevention of COVID-19 (masks, temperature checkers, soap, hand sanitizers, etc.). In addition, another inhibiting factor is the lack of awareness of school residents regarding the dangers of Covid-19. Based on the observational data, it can be seen that as many as 57.1% of the schools continue to seek solutions to these problems. One of the efforts made by the school is to provide education through the manufacture of disinfectants independently. With this, in addition to being able to overcome the problem of limited facilities and infrastructure to overcome the corona virus, it can also be applied as an educational medium for the COVID-19 pandemic. Not only that, schools also use social media as a means to provide education related to COVID-19.

Schools also continue to provide education related to COVID-19 in various ways. As many as 71.4% of teachers choose to always remind the dangers of covid-19 without having to relate it to learning materials while the rest choose to associate all subjects with the covid-19 pandemic and internalize disaster education through disaster education props. Regarding chemistry lessons, most of the chemistry teachers (57.2%) considered that covid-19 education could be inserted into certain sub-learning materials, one of which was through the manufacture of disinfectants and sanitizers independently. Meanwhile, other chemistry teachers argue that teachers can insert covid-19 education in all learning materials.

Conclusion

Blended Learning is one of the most widely applied learning systems in education units in Southwest Aceh during the Covid-19 pandemic. In addition, some other schools also organize online and offline learning. Through Instruction Letter Number 423 of 2020, the Regent of Aceh Barat Daya allowed school units at ABDYA to carry out face-to-face learning while still adhering to health protocols and guided by central government policies. Based on the observations obtained, it shows that most of the schools in ABDYA have tried to comply with the rules that have been set by the local government and the central government. Educators provide education related to covid-19 by socializing the dangers of covid-19 through announcements in the school environment, learning begins by providing education regarding the dangers of covid-19, school principals also always remind teachers to inform students about the dangers of covid-19, and teachers give examples Covid-19 prevention. However, in its implementation, education for the COVID-19 pandemic is constrained by several factors, including the procurement of facilities and

infrastructure for the prevention of COVID-19 and the lack of concern for school residents regarding the dangers of COVID-19. To overcome this problem, teachers are still trying to educate by making disinfectants independently and education is also carried out through social media. Most chemistry teachers consider that COVID-19 education can be inserted into certain sub-learning materials, one of which is through the manufacture of disinfectants and sanitizers independently. Meanwhile, other chemistry teachers argue that teachers can insert covid-19 education in all learning materials.

References

Ansori, A., & Sari, A. F., (2020). Inovasi Pendidikan di masa Pandemi Covid-19. *Jurnal Literasi Pendidikan Nusantara,* 1(2), 56-62. Retrieved from: http://jurnal.uinbanten.ac.id/index.php/jlpn/article/view/3735

Herliandry, L., Nurhasanah, Suban, M., & Kuswanto, H., (2020). Pembelajaran Pada Masa Pandemi Covid-19. *Jurnal Teknologi Pendidikan,* 22(1), 65-70. https://doi.org/10.21009/jtp.v22i1.15286

Kemendikbud. (2020). *Surat Edaran Kementerian Pendidikan Nomor 15 Tahun 2020 Tentang Pedoman Penyelenggaraan Belajar dari Rumah dalam Masa Darurat Penyebaran Corona Virus Disease (covid 19).* Jakarta: Sekjen RI.

Kristina, M. (2020). Model Pelaksanaan Pembelajaran Daring Pada Masa Pandemi Covid-19 di Provinsi Lampung. *Jurnal Idaarah*, 4(2), 200-209. https://doi.org/10.24252/idaarah.v4i2.16945

Maywati. S., Santiana, Oktiwanti, l., & Hoeronis, I. (2021). Penerapan Adaptasi Kebiasaan Baru Dalam Mencegah Penularan Covid-19 di Sekolah Dasar Kec. Monanjaya Kab. Tasikmalaya. *Jurnal Abdimas,* 2 (1), 56-62. Retrieved from: https://jurnal.unikal.ac.id/index.php/abdimas/article/view/1296

Nurhadi, N. (2020). Blanded Learning dan Aplikasinya di Era New Normal Pandemi Covid-19. *Jurnal Agriektensia,* 19 (1), 121-128. Retrieved from: https://jurnal.polbangtanmalang.ac.id/index.php/agriekstensia/article/view/936

Nurhadi, Z., Parentza, H., Munandar, A., & Muldan, Y. (2020). Strategi Komunikasi dan Edukasi Pencegahan Covid-19. *Jurnal Pengabdian Masyarakat,* 4(1), 538-543. https://doi.org/10.35568/abdimas.v4i1.916

Purwanto, A., Pramono, R., asbari, M., Hyun, C., Wijayanti, L., Putri, R., & Santoso, Priyono.

(2020). Studi Eksploratif Dampak Pandemi Covid-19 Terhadap Proses Pembelajaran Online di Sekolah Dasar. *Jurnal Pendidikan, Psikologi dan Konseling,* 2 (1), 1-12. https://doi.org/10.31004/edukatif.v2i1.89

Rukajat, Ajat. 2018. *Pendekatan Penelitian Kualitatif.* Yogyakarta: CV. Budi Utama

Sadikin, A., & Hamidah, A. (2020). Pembelajaran Daring di Tengah Wabah Covid-19. *Jurnal Ilmiah Pendidikan Biologi,* 6(2), 214-224. https://doi.org/10.22437/bio.v6i2.9759

Sanyaja, J., & Rastini. (2020). Implementasi Kurikulum Darurat di Masa Pandemi Covid-19 Dalam Upaya Pemenuhan Hak Pendidikan. *Jurnal Hukum Indonesia,* 1(2), 162-174. https://e-journal.iainsalatiga.ac.id/index.php/jil/article/view/4583

Setyowati, D.L. 2019. *Pendidikan Kebencanaan. Semarang* : Universitas Negeri Semarang.

Sri, H., & Sukarno. (2021). Inovasi Pembelajaran Online pada Masa Pandemi Covid-19. *Jurnal Pendidikan dan Pembelajaran Indonesia,* 4(2), 479-485. https://doi.org/10.35719/akselerasi.v2i1.79

Yudiawan, A. (2020). Mitigasi Bencana: Manajemen Wabah COVID-19 Di Satuan PAUD. *PRATAMA Widya : Jurnal Pendidikan Anak Usia Dini,* 5(2), 112-124. dhttp://dx.doi.org/10.25078/pw.v5i2.1650

Yuliati, Y., & Saputra, D., (2020). Membangun Kemandirian Belajar Mahasiswa Melalui *Blanded Learning* di Masa Pandemi Covid-19. *Jurnal Elementari Edukasia,* 3(1), 142-149. http://jurnal.unma.ac.id/index.php/jee/article/view/2218