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Supporting learning recovery in elementary schools through student participation in Kampus Mengajar Perintis program

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ABSTRACT

This study aims to describe the conditions and problems occurring in schools, as well as the solutions implemented by university students during the Kampus Mengajar Perintis. To achieve this objective, this study employed a qualitative descriptive method using observation and documentation techniques. The research subjects comprised nine Grade III students at SD N Cidokom 03. The study was conducted from 12 October to 18 December 2020 at SD N Cidokom 03, Rumpin District, Bogor Regency. The research data consisted of observational findings and supporting literature. The results indicate that the university students participating in the Kampus Mengajar Perintis programme at SD N Cidokom 03 focused primarily on strengthening literacy and numeracy learning, as well as cultivating character values through traditional games and other simple activities. In addition, the students assisted teachers throughout teaching and learning activities, including instruction delivery and administrative tasks.

Keywords: Covid-19 pandemic; elementary school; Indonesia; Kampus Mengajar Perintis; Ministry of Education and Culture of the Republic of Indonesia

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1. INTRODUCTION

In December 2019, an outbreak of pneumonia of unknown aetiology was first reported in Wuhan, Hubei Province, China (Lauer et al., 2020; Ruan et al., 2020; Shi et al., 2020; Sohrabi et al., 2020; Ai et al., 2020; Syarif & Mawardi, 2021; Wang et al., 2020; Zhou et al., 2020). The outbreak was found to infect human respiratory epithelial cells, endowing the disease with a strong capacity for human infection and person-to-person transmission (Beigel et al., 2020; Shi et al., 2020; Wang et al., 2020). This communicable respiratory disease demanded international attention as a public health emergency, causing considerable morbidity and mortality in more than 30 countries worldwide (Shi et al., 2020; Syarif & Mawardi, 2021). The World Health Organization (WHO) subsequently declared the disease a pandemic and designated it as Covid-19 (Peretto et al., 2020; Polack et al., 2020; Wang et al., 2020; Zhou et al., 2020).

Following the WHO's pandemic declaration, Covid-19 spread massively from Wuhan to the rest of China and thirty-three other countries within two months (Ai et al., 2020). By early 2020, the Covid-19 pandemic had affected countries worldwide. Italy, for instance, was affected in early February 2020 (Zhou et al., 2020), while the United States, particularly the state of Washington, recorded its first case on January 31, 2020 (Richardson et al., 2020). On February 24, 2020, Japan, South Korea, Singapore, and Iran were likewise afflicted, and these countries emerged among those with the highest Covid-19 fatality rates (Ai et al., 2020).

In Indonesia, the Covid-19 pandemic began in early March 2020 (Sundawa et al., 2021). This situation was alarming for the country. In an effort to break the chain of transmission, the Indonesian government began issuing policies such as physical distancing in mid-March 2020 and large-scale social restrictions or *Pembatasan Sosial Berskala Besar (PSBB)* in late March 2020, encompassing school and office closures, restrictions on religious gatherings, and prohibitions on activities in public spaces (D'arqom et al., 2021). Despite these containment measures, the rate of Covid-19 transmission continued to rise sharply daily (Widayati, 2021). To monitor the spread of the virus, the National Disaster Management Authority or *Badan Nasional Penanggulangan Bencana (BNPBB)* assigned risk categories to regions using a color-coded system: green zone (unaffected), orange zone (moderate risk), yellow zone (low risk), and red zone (high risk) (Sundawa et al., 2021).

Efforts to contain Covid-19 were not limited to the central government; the Ministry of Education and Culture of the Republic of Indonesia also took part by issuing educational policies. These policies were formalized through a series of official circulars, including: (1) Circular Letter of the Minister of Education and Culture No. 3 of 2020 on Covid-19 Prevention in Educational Units; (2) Ministerial Letter No. 46962/MPK.A/HK/2020 on Online Learning and Working from Home for Higher Education Institutions in the Context of Covid-19 Prevention; (3) Circular Letter No. 4 of 2020 on the Implementation of Educational Policy during the Covid-19 Emergency, which introduced measures such as the cancellation of the National Examination, the implementation of Distance Learning or *Pembelajaran Jarak Jauh (PJJ)*, the conduct of examinations online, and other related policies; and (4) Circular Letter of the Minister of Administrative and Bureaucratic Reform No. 19 of 2020 on Adjustments to the Civil Service Work System in Efforts to Prevent the Spread of Covid-19 within Government Institutions.

Among the numerous directives issued by Kemdikbud RI, the *PJJ* policy was the most acutely felt by the schools. The implementation of the *PJJ* has drawn considerable criticism from students, teachers, and parents alike, as it has brought with it a host of practical difficulties. Many community members objected to the *PJJ* on the grounds that it could not be uniformly applied across all schools in Indonesia, given that significant geographic disparities affected the feasibility of distance learning (Nafrin & Hudaidah, 2021; Satrianingrum & Prasetyo, 2021). Research has further demonstrated that the primary factors hindering the effective implementation of *PJJ* include: inadequate infrastructure; the absence of electronic devices (smartphones or laptops) among many students and parents; poor internet connectivity in rural and mountainous areas; limited data packages; insufficient technological adaptability on the part of both educators and learners; parents' unpreparedness to support home learning; and the generally inadequate economic circumstances of students and their families (Astuti, 2021; Harahap et al., 2021;

Mamluah & Maulidi, 2021; Novianto et al., 2020; Parid & Julrissani, 2021; Surahman & Sulthoni, 2020; Syarif & Mawardi, 2021).

Rahma et al. (2021) indicate that online learning adversely affects the psychological condition of primary school students. Online learning at the primary level proved ineffective, as teachers' instructional materials were not adequately understood by students, and parents provided insufficient support during remote learning. Both factors had a detrimental psychological impact on children, leading to increased reluctance to complete their assignments.

Suhardi et al. (2021) note that *PJJ* implemented under emergency or simplified curricula pose substantial difficulties for teachers. Distance learning demanded heightened creativity in instruction, and those who struggled to adapt were compelled to assign tasks rather than deliver substantive lessons to students. Teachers generally felt that the teaching and learning process during *PJJ* remained far from being optimal. This policy forced educators to swiftly adapt their curricula, syllabi, lesson plans, instructional materials, and teaching media (Fitriya et al., 2021). As a result, learning objectives were frequently unmet, instructional content was often left incomplete, the use of teaching media was suboptimal, and student assessment was reduced to cognitive evaluation alone (Sari et al., 2021). Furthermore, *PJJ* makes it difficult for teachers to monitor students' comprehension and academic progress (Syafa'ati et al., 2021).

Beyond its impact on educators, the situation also posed considerable challenges for students, who were burdened with heavier workloads assigned by teachers. Kahfi (2021) notes that *PJJ* had a negative effect on children's cognitive development, attributable to the accumulation of school tasks, increased reliance on electronic devices, reduced social interaction, and heightened levels of stress, anxiety, and boredom. Many parents also experienced stress as a result of the difficulties encountered when accompanying their children in home-based learning (Fitriya et al., 2021; Suciati & Syafiq, 2021). Not all parents were equally equipped to support their children's online learning, however. Palupi (2021) observed that parental educational attainment influences the ability to provide adequate learning support at home, with parents holding secondary-level qualifications tending to experience higher stress levels than those with tertiary qualifications. Nevertheless, parents play a critical role in the success of *PJJ*. Wulandari and Fadhila (2021) identified four key parental roles during the pandemic: (1) carer and educator, (2) guide, (3) motivator, and (4) facilitator.

Given the numerous problems arising from *PJJ*, it is evident that distance learning has yet to function effectively in this context. Baety and Munandar (2021) reported that 63 percent of 118 respondents considered distance learning to be insufficiently effective. Astuti (2021) found that survey results on the effectiveness of online learning stood at only 39.6 percent, assessed against four indicators: (1) face-to-face learning is more effective than online learning; (2) instructional content can be delivered effectively to students; (3) student performance improved during online learning; and (4) students are motivated to learn in an online environment. Similarly, Anjelin and Purnomo (2021) concluded that online teaching and learning activities have not been effective or optimal, owing to persistent obstacles, including inadequate infrastructure, unsupportive network conditions, and insufficient knowledge of information and communication technology.

Kemdikbud RI has sought to address the problems confronting schools during the implementation of the *PJJ*. One concrete solution has been the introduction of a programme engaging university students from across Indonesia to provide direct assistance to schools affected by Covid-19, known as the Kampus Mengajar Perintis Program. This program aims to support affected schools in the areas of instructional assistance, technology adaptation, school administration, and related activities. It was received positively by the schools designated as programme participants, and both the Kampus Mengajar Perintis and Kampus Mengajar programmes yielded significant benefits for university students, school students, and schools. Participating university students assisted affected schools in adapting to technology, managing administrative tasks, and fulfilling other needs (Hamzah, 2021; Rosita & Damayanti, 2021).

2. METHOD

This study employed a qualitative descriptive method, with data collected through observation and documentation. The research subjects comprised nine Grade III students at SD N Cidokom 03. The study was conducted from 12 October to 18 December 2020 at SD N Cidokom 03, Rumpin District, Bogor Regency. Primary data were gathered through direct observation, yielding documents related to teaching and learning activities, including instructional materials, activity documentation, and messages from the Grade III WhatsApp Group of SD N Cidokom 03. Secondary data consisted of prior studies relevant to this study. The research procedure was adapted from Sugiyono's (2019) framework, comprising four stages: (1) data collection, (2) data reduction, (3) data presentation, and (4) conclusion drawing.

3. RESULTS AND DISCUSSION

3.1. Programme Implementation

The Principal of SD N Cidokom 03, Mr. Yaya Supriyatna, S.Pd., requested that the first author serve as a teaching assistant for Grade III. Teaching activities within the Kampus Mengajar Perintis programme at SD N Cidokom 03 proceeded smoothly throughout the ten-week duration of the programme. The instructions commenced with a continuation of Theme Three and concluded with Theme Four. Teaching was conducted effectively through a blended schedule established by SD N Cidokom 03: online learning was carried out from Monday to Wednesday, while face-to-face learning took place on Thursday and Friday.

Additional programs included the teaching of the four language skills, listening, speaking, reading, and writing, to Grade III students, as well as activities to develop students' confidence and speaking skills in front of the class. During the learning process, activities fostering a sense of belonging to local cultural heritage, particularly that of the area surrounding SD N Cidokom 03, were integrated into the lessons. Character education was also incorporated into the learning process. Cultivating character values among students during the Covid-19 pandemic was not straightforward. Maria et al. (2021) note that educators continued to face obstacles in effectively implementing character education in schools throughout the pandemic.

3.1.1. Teaching and Learning Activities

For more details, see [Figure 1](#).



Figure 1. Singing the Song “Bermain Layang-layang”

Teaching and learning activities at SD N Cidokom 03 are conducted in a play-based manner. Students were tasked with constructing kites using simple materials, which were then connected to the concepts of geometric shapes. Students were also invited to sing a kite-themed song to prevent learning from fatigue.

For more details, see [Figure 2](#).



Figure 2. Taking Turns Reading

A central focus of teaching and learning activities at SD N Cidokom 03 was strengthening reading and writing literacy, as not all students possessed basic reading and writing abilities. In addition to developing students' reading skills, the activity of taking turns reading was intended to train their peers' listening skills. Through consistent reading and listening practice, students gradually became capable of respecting their classmates who were speaking, as evidenced by their attentiveness. Students also demonstrated the ability to identify and note key points from stories and respond correctly to comprehension questions without consulting their books. Students who were tasked with reading aloud showed growing composure. Through these activities, students progressively improved their language skills, particularly reading and listening, which are fundamental to understanding all instructional material.

For more details, see [Figure 3](#).



Figure 3. Quiz

Upon completing the instructional delivery, the first author consistently administered a quiz to the students. The quiz trained students' speed and accuracy in responding to questions written on a blackboard. Students who knew the answer raised their hands and approached the front of the class when selected. Quizzes were effective in enhancing student engagement. Students who answered the greatest number of questions correctly received appropriate recognition and praise.

For more details, see [Figure 4](#).



Figure 4. Drawing the Sequence of a Flood Event

Students demonstrated an understanding of the importance of environmental conservation and the actions required to protect it. They were able to illustrate natural disasters and their causes through drawings and collaborated in producing illustrations of flood events. Through this activity, students were expected to comprehend and apply the lesson's content in their daily lives, thereby contributing to environmental stewardship.

For more details, see [Figure 5](#).

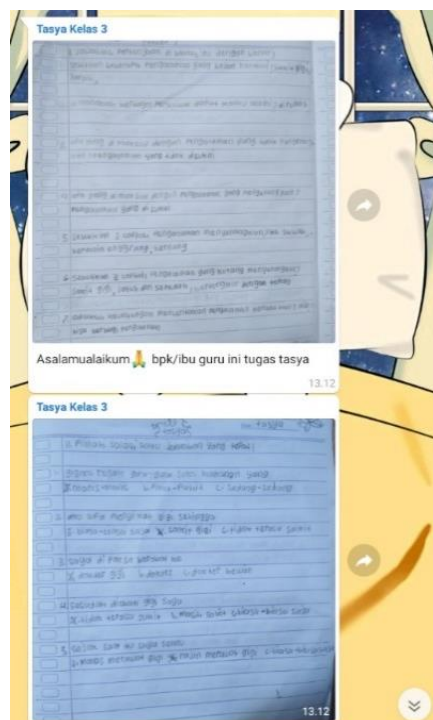


Figure 5. Assignment Submission via WhatsApp Group

In addition to face-to-face learning, SD N Cidokom 03 also conducted online learning sessions to minimize the risk of Covid-19 transmission and comply with regulations set by the central and regional governments. However, online learning could not be followed by all students, as only three of the nine students in the class owned a smartphone. This was the primary reason for implementing a dual-mode learning approach at SD N Cidokom 03.

For more details, see [Figure 6](#).



Figure 6. Experiment on the States of Matter: Liquid, Solid, and Gas

Following the delivery of the instructional content, the students were regularly invited to apply the material through practical activities. One such activity involved experiments on the states of matter using simple tools and materials. Through this hands-on experience, the students developed an understanding of the properties, forms, and volumes of liquids, solids, and gases. Students successfully conducted experiments using the provided simple equipment and demonstrated effective collaboration within their groups.

3.1.2. Character Value Cultivation

For more details, see [Figure 7](#).



Figure 7. Setting Up a Reading Corner

On the first day of the program, the first author observed a damaged cabinet that caused books to be stored on top of desks in a disorganized manner. In response, the author invited students to construct a simple bookshelf from used cardboard boxes to store textbooks neatly and protect them from damage. This initiative also aimed to encourage students to develop habits of orderliness and be attentive to the conditions of their surroundings.

For more details, see [Figure 8](#).



Figure 8. Video on 7 Steps for a Healthy Lifestyle during the Pandemic

During the Covid-19 pandemic, university students deployed to schools were expected to promote awareness of the importance of clean living and adherence to health protocols in schools. In response to this mandate, the first author produced an instructional video on seven steps for a healthy lifestyle, covering: (1) wearing a mask, (2) maintaining physical distance, (3) washing hands with soap, (4) exercising regularly, (5) drinking sufficient water, (6) consuming nutritious food, and (7) disposing waste in designated bins.

For more details, see [Figure 9](#).



Figure 9. Practising the 7-Step Handwashing Technique

Following an instructional video on the importance of handwashing, the students were guided through the practice of the seven-step handwashing technique. This activity aimed to encourage students to develop healthy hygiene habits, particularly during the Covid-19 pandemic. Handwashing reduces the accumulation of germs on the palms.

For more details, see [Figure 10](#).



Figure 10. Communal Classroom Cleaning

In addition to wearing masks and washing hands, the first author invited students to maintain the cleanliness of their classrooms to create a comfortable learning environment. A clean environment contributes to students' well-being by minimizing their exposure to germs. Students showed great enthusiasm for creating a comfortable classroom environment through collective cleaning activities.

For more details, see [Figure 11](#).



Figure 11. Playing the Traditional Game “Egrang”

Learning was not confined to the classroom; outdoor activities were also incorporated to prevent student fatigue and maintain enthusiasm for school attendance. This was considered especially important given the considerable pressure students experienced from extended periods of home-based learning during the Covid-19 pandemic. Students were visibly enthusiastic about playing the traditional game of egrang with their peers. The activity was intended to foster students' appreciation and love for the traditional games of their regions. Communal play also strengthened students' emotional bonds with one another, which is an important consideration at a time when children are spending increasing amounts of time on electronic devices rather than engaging in direct social interaction.

For more details, see [Table 1](#).

Table 1. Programme Implementation Schedule

No.	Day	Description
1	Monday	Online learning was based on homework assigned on Thursday and Friday. It is used to prepare learning materials.
2	Tuesday	Online learning was based on homework assigned on Thursday and Friday. It is used to prepare learning materials.
3	Wednesday	Online learning was based on homework assigned on Thursday and Friday. It is used to prepare learning materials.
4	Thursday	Face-to-face learning was conducted from 07:00 to 11:00.
5	Friday	Face-to-face learning was conducted from 07:00 to 11:00.

3.1.3. Assisting with Technology Adaptation

Online learning could not proceed effectively, as the majority of students did not own a smartphone or electronic device. In addition, internet signals in the vicinity of students’ homes were extremely poor. According to reports from the teaching staff, the distribution of Internet quota cards at SD N Cidokom 03 was unequal, meaning that not all students received free learning quota allocations.

3.1.4. Assisting with School and Teacher Administration

Administrative assistance activities for the school and teachers within the Kampus Mengajar Perintis programme at SD N Cidokom 03 proceeded smoothly. These activities included preparing daily student attendance records and compiling student assessment recaps throughout the learning period.

For more details, see [Figure 12](#).

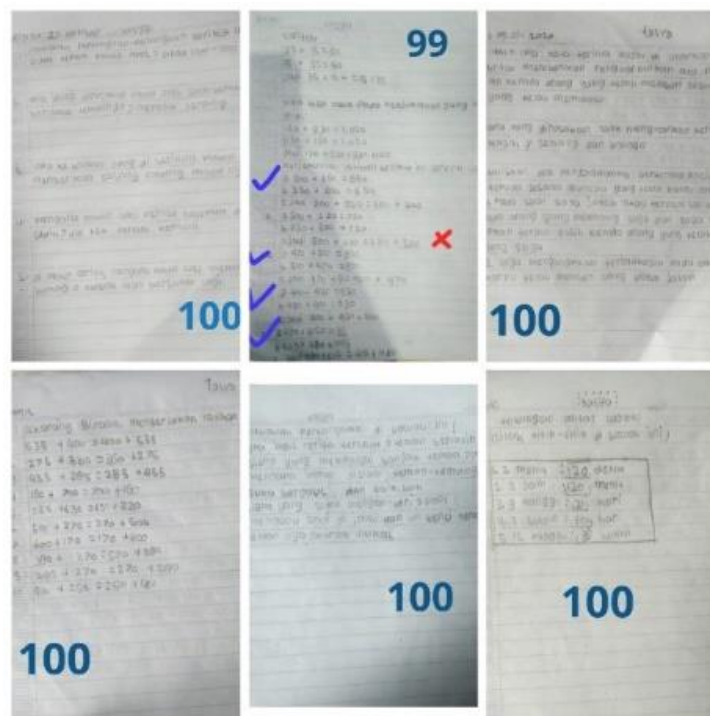


Figure 12. Assessment of Daily Student Assignments

In addition to supporting teachers during teaching and learning activities, the classroom teacher requested that the university student assess students’ daily assignments and compile them into a photo collage for presentation. The collage was subsequently sent to each student’s parents so that they could monitor their children’s daily assignment results.

For more details, see [Figure 13](#).

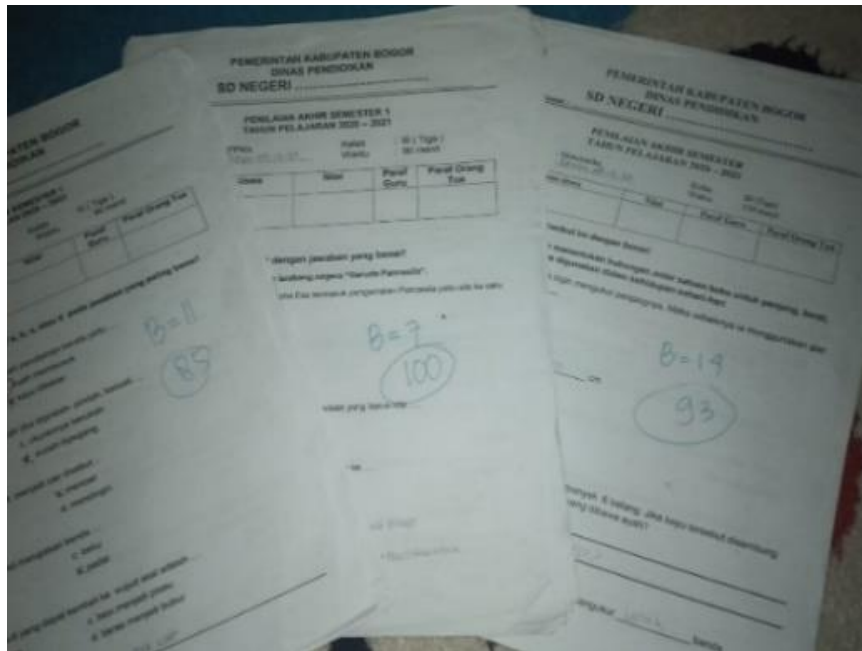


Figure 13. Marking End-of-Semester Examination Answers

The Grade III teacher at SD N Cidokom 03 requested assistance in marking students' end-of-semester examination papers. The corrected results were compiled in Microsoft Excel and subsequently submitted to the class teacher for further processing and entry into the digital school report system.

3.2. Problems Encountered

3.2.1. Shortage of Teaching Staff

SD N Cidokom 03 has six classes served by only five teachers. The shortage of class teachers meant that one teacher was required to handle two classes simultaneously, which placed additional pressure on educators during the pandemic. The inability to hire contract teachers was largely attributed to insufficient School Operational Assistance or *Bantuan Operasional Sekolah (BOS)* funds, which is a consequence of the school's very low student enrolment, which directly affects the amount of BOS funding received. Given this situation, the first author frequently provided backup support for the teacher in charge of grades 1 and 2, Ms. Pajriani Dewi, S.Pd..

3.2.2. Poor Internet Accessibility

SD N Cidokom 03, located in Kampung Jengkol, Mekarjaya Village, Rumpin District, Bogor Regency, West Java Province, is situated in an area with extremely limited internet access. This is largely due to the dense tree cover surrounding students' homes near the school. The school and students' residences are bordered by a rubber plantation. This condition significantly impeded the implementation of *PJJ*.

3.2.3. Majority of Students and Parents Do Not Own a Smartphone

The majority of students at SD N Cidokom 03 do not possess smartphones or electronic devices for online learning. In Grade III, for example, only three of the eight students owned smartphones. This stark disparity between device-owning and non-device-owning students was a fundamental obstacle, as a smartphone or equivalent electronic device is a prerequisite for online teaching and learning.

3.2.4. Majority of Students Unable to Afford Internet Data Packages

Beyond the absence of electronic devices, the inadequate economic circumstances of many families also meant that parents were unable to purchase Internet data packages for their children's distance learning. The lack of Internet access poses a direct and significant obstacle to the smooth implementation of the *PJJ*.

3.2.5. Two Students Unable to Read

Two students in Grade III at SD N Cidokom 03 had not yet acquired basic reading skills. This was compounded by the fact that neither student possessed a smartphone for distance learning, and both lived at considerable distances from other students, further limiting their ability to participate in the *PJJ*. These circumstances made learning even more difficult for the two students.

3.2.6. Absence of Extracurricular or Additional Activities beyond Classroom Instruction

The absence of extracurricular activities has a noticeable effect on student engagement. Students were engaged only in classroom learning without any additional activities to stimulate their interest and motivation. The lack of extracurricular provisions also limited the development of students' skills and provided no channel through which they could pursue interests beyond the formal curriculum. Without such outlets, students have no opportunities for development outside the classroom.

3.3. Solutions Implemented

In response to the various problems identified, two principal solutions were adopted: conducting teaching and learning activities on a face-to-face basis with controlled class attendance and providing additional activities outside regular lesson hours. The first solution addressed the needs of students without smartphones or internet data packages, those living in areas with poor connectivity, and those requiring more intensive direct support with foundational reading skills. The second solution addressed the absence of extracurricular activities in schools.

Face-to-face learning proved to be the most effective solution for the challenges at SD N Cidokom 03, which was simply not prepared for the demands of distance learning given its constrained circumstances. In-person instruction alleviated the burden on parents and students, ensuring that all students had equal access to learning. Even those without smartphones or Internet data packages were able to continue attending and participating in lessons.

Additional activities outside lesson hours were also warmly received by the students and the school community. As a result, student attendance increased significantly, and enthusiasm for attending school grew markedly. These supplementary activities served to cultivate character values among students, including responsibility, communal solidarity, national pride, and other related values among students.

3.4. Recommendations for Improvement

Recommendations for the subsequent period of this program include the need for more effective and efficient communication and coordination. The program also requires clearer direction and more thorough planning to prevent confusion arising from misinformation, which has the potential to cause disruption among Kampus Mengajar Perintis participants.

For future participants assigned to SD N Cidokom 03, greater attention should be given to technology adaptation activities. Recommendations directed at the government include the need for more equitable provision of facilities and infrastructure, including schools located far from urban centers. Where adequate infrastructure is in place, teaching and learning activities can be conducted in a more conducive and comfortable environment for students.

4. CONCLUSION

Based on the results and discussion presented above, the assistance provided by university students to the school through the Kampus Mengajar Perintis programme centered on educating students about

the importance of health protocols during the Covid-19 pandemic and the development of the four language skills: listening, speaking, reading, and writing. Through these activities, the Kampus Mengajar Perintis program was successfully implemented and completed in its entirety. The program succeeded in encouraging students to continue attending school during the pandemic. Prior to the commencement of the Kampus Mengajar Perintis programme, only four students from Grade III of SD N Cidokom 03 attended school. By the time the program concluded, all the Grade III students were present and actively participating in teaching and learning activities.

Ethical Approval

Not Applicable

Informed Consent Statement

Not Applicable

Authors' Contributions

R conceptualized the study, conducted field observations, collected and organized the data, and prepared the original draft of the manuscript. PD, NU, and FA contributed to the implementation context of the study, supported the data documentation and interpretation, and critically reviewed and edited the manuscript. All authors contributed to the discussion of the findings and approved the final manuscript.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Data Availability Statement

The data presented in this study are available on request from the corresponding author due to privacy reasons.

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Notes on Contributors

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REFERENCES

- Ai, T., Yang, Z., Hou, H., Zhan, C., Chen, C., Lv, W., Tao, Q., Sun, Z., & Xia, L. (2020). Correlation of chest CT and RT-PCR testing for coronavirus disease 2019 (COVID-19) in China: A report of 1014 cases. *Radiology*, 296(2), E32–E40. <https://doi.org/10.1148/radiol.20200642>
- Anjelin, A. E., & Purnomo, H. (2021). Efektivitas pembelajaran daring siswa sekolah dasar di masa pandemi (The effectiveness of online learning for elementary school students during the pandemic). *JiIP: Jurnal Ilmiah Ilmu Pendidikan*, 4(3), 159–163. <https://doi.org/10.54371/jiip.v4i3.236>
- Astuti, M. (2021). Analisis efektifitas penyelenggaraan pembelajaran daring di sekolah dasar pada masa pandemi Covid-19 (Analysis of the effectiveness of online learning implementation in elementary schools during the Covid-19 pandemic). *Journal of Integrated Elementary Education*, 1(1), 41–49. <https://doi.org/10.21580/jieed.v1i1.7224>
- Baety, D. N., & Munandar, D. R. (2021). Analisis efektifitas pembelajaran daring dalam menghadapi wabah pandemi Covid-19 (Analysis of the effectiveness of online learning in facing the Covid-19 pandemic outbreak). *Edukatif: Jurnal Ilmu Pendidikan*, 3(3), 880–889. <https://doi.org/10.31004/edukatif.v3i3.476>
- Beigel, J. H., Tomashek, K. M., Dodd, L. E., Mehta, A. K., Zingman, B. S., Kalil, A. C., Hohmann, E., Chu, H. Y., Luetkemeyer, A., Kline, S., Lopez de Castilla, D., Finberg, R. W., Dierberg, K., Tapson, V., Hsieh, L., Patterson, T. F., Paredes, R., Sweeney, D. A., Short, W. R., ... Lane, H. C. (2020). Remdesivir for the treatment of Covid-19—Final report. *The New England Journal of Medicine*, 383(19), 1813–1826. <https://doi.org/10.1056/NEJMoa2007764>
- D'arqom, A., Sawitri, B., Nasution, Z., & Lazuardi, R. (2021). “Anti-COVID-19” medications, supplements, and mental health status in Indonesian mothers with school-age children. *International Journal of Women's Health*, 13, 699–709. <https://doi.org/10.2147/IJWH.S316417>
- Fitriya, D., Magdalena, I., & Fadhillahwati, N. F. (2021). Konsep pembelajaran daring di era pandemi Covid-19 (The concept of online learning in the Covid-19 pandemic era). *Cerdika: Jurnal Ilmiah Indonesia*, 1(3), 182–188. <https://doi.org/10.36418/cerdika.v1i3.30>
- Hamzah, R. A. (2021). Pelaksanaan Kampus Mengajar Angkatan I Program Merdeka Belajar Kemdikbud di sekolah dasar (Implementation of the first cohort of the Kampus Mengajar Program under the Ministry of Education and Culture's Merdeka Belajar Program in elementary schools). *Dedikasi: Jurnal Pengabdian Kepada Masyarakat*, 1(2), 1–8. <https://doi.org/10.46368/dpkm.v1i2.339>
- Harahap, S. A., Dimiyati, D., & Purwanta, E. (2021). Problematika pembelajaran daring dan luring anak usia dini bagi guru dan orang tua di masa pandemi Covid-19 (Problems of online and offline learning for early childhood among teachers and parents during the Covid-19 pandemic). *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(2), 1825–1836. <https://doi.org/10.31004/obsesi.v5i2.1013>
- Kahfi, A. (2021). Dampak pembelajaran daring di masa pandemi Covid-19 terhadap perkembangan kognitif anak (The impact of online learning during the Covid-19 pandemic on children's cognitive development). *Dirasab: Jurnal Pemikiran dan Pendidikan Dasar Islam*, 4(1), 14–23. <https://ejournal.ibi.ac.id/index.php/jurdir/article/view/219>
- Lauer, S. A., Grantz, K. H., Bi, Q., Jones, F. K., Zheng, Q., Meredith, H. R., Azman, A. S., Reich, N. G., & Lessler, J. (2020). The incubation period of coronavirus disease 2019 (COVID-19) from publicly reported confirmed cases: Estimation and application. *Annals of Internal Medicine*, 172(9), 577–582. <https://doi.org/10.7326/M20-0504>
- Mamluah, S. K., & Maulidi, A. (2021). Pembelajaran jarak jauh (PJJ) di masa pandemi COVID-19 di sekolah dasar (Distance learning during the COVID-19 pandemic in elementary schools). *Jurnal Basicedu*, 5(2), 869–877. <https://doi.org/10.31004/basicedu.v5i2.800>
- Maria, R., Rifma, R., & Syahril, S. (2021). Efektivitas pembelajaran dan pembinaan karakter di masa pandemi Covid-19 (The effectiveness of learning and character development during the Covid-19

- pandemic). *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1503–1512. <https://doi.org/10.31004/edukatif.v3i4.566>
- Nafarin, I. A., & Hudaidah, H. (2021). Perkembangan pendidikan Indonesia di masa pandemi Covid-19 (The development of Indonesian education during the Covid-19 pandemic). *Edukatif: Jurnal Ilmu Pendidikan*, 3(2), 456–462. <https://doi.org/10.31004/edukatif.v3i2.324>
- Novianto, G. D., Herman, D. A., & Hadiapurwa, A. (2020). Pelaksanaan pendidikan jarak jauh bagi pendidik dan peserta didik di masa pandemi Covid-19 di sekolah dasar (Implementation of distance education for educators and students during the Covid-19 pandemic in elementary schools). *Jurnal Inovasi Pendidikan dan Pembelajaran Sekolah Dasar*, 4(2), 98–111. <https://doi.org/10.24036/jippsd.v4i2.112590>
- Palupi, T. N. (2021). Tingkat stres ibu dalam mendampingi siswa-siswi sekolah dasar selama belajar di rumah pada masa pandemi Covid-19 (Mothers' stress levels in assisting elementary school students during home learning in the Covid-19 pandemic). *Jurnal Psikologi Pendidikan dan Pengembangan Sumber Daya Manusia*, 10(1), 36–48. <https://doi.org/10.37721/psi.v9i2.752>
- Parid, M., & Julrissani, J. (2021). Dampak pandemi Covid-19 terhadap proses pembelajaran siswa tingkat sekolah dasar (The impact of the Covid-19 pandemic on the learning process of elementary school students). *Vox Edukasi: Jurnal Ilmiah Ilmu Pendidikan*, 12(1), 114–121. <https://jurnal.stkipppersada.ac.id/jurnal/index.php/VOX/article/view/835>
- Peretto, G., Sala, S., & Caforio, A. L. P. (2020). Acute myocardial injury, MINOCA, or myocarditis? Improving characterization of coronavirus-associated myocardial involvement. *European Heart Journal*, 41(22), 2124–2125. <https://doi.org/10.1093/eurheartj/ehaa396>
- Polack, F. P., Thomas, S. J., Kitchin, N., Absalon, J., Gurtman, A., Lockhart, S., Perez, J. L., Pérez Marc, G., Moreira, E. D., Zerbini, C., Bailey, R., Swanson, K. A., Roychoudhury, S., Koury, K., Li, P., Kalina, W. V., Cooper, D., Frenck, R. W., Jr., Hammitt, L. L., ... Gruber, W. C. (2020). Safety and efficacy of the BNT162b2 mRNA Covid-19 vaccine. *The New England Journal of Medicine*, 383(27), 2603–2615. <https://doi.org/10.1056/NEJMoa2034577>
- Rahma, F. N., Wulandari, F., & Husna, D. U. (2021). Pengaruh pembelajaran daring di masa pandemi Covid-19 bagi psikologis siswa sekolah dasar (The influence of online learning during the Covid-19 pandemic on elementary school students' psychology). *Edukatif: Jurnal Ilmu Pendidikan*, 3(5), 2470–2477. <https://doi.org/10.31004/edukatif.v3i5.864>
- Richardson, S., Hirsch, J. S., Narasimhan, M., Crawford, J. M., McGinn, T., Davidson, K. W., & the Northwell COVID-19 Research Consortium. (2020). Presenting characteristics, comorbidities, and outcomes among 5700 patients hospitalized with COVID-19 in the New York City area. *JAMA*, 323(20), 2052–2059. <https://doi.org/10.1001/jama.2020.6775>
- Rosita, D. A., & Damayanti, R. (2021). Pelaksanaan Program Kampus Mengajar Perintis pada sekolah dasar terdampak pandemi Covid-19 (Implementation of the Kampus Mengajar Perintis Program in elementary schools affected by the Covid-19 pandemic). *Prima Magistra: Jurnal Ilmiah Kependidikan*, 2(1), 42–49. <https://doi.org/10.37478/jpm.v2i1.852>
- Ruan, Q., Yang, K., Wang, W., Jiang, L., & Song, J. (2020). Clinical predictors of mortality due to COVID-19 based on an analysis of data of 150 patients from Wuhan, China. *Intensive Care Medicine*, 46(5), 846–848. <https://doi.org/10.1007/s00134-020-05991-x>
- Sari, R. P., Tussyantari, N. B., & Suswandari, M. (2021). Dampak pembelajaran daring bagi siswa sekolah dasar selama Covid-19 (The impact of online learning on elementary school students during Covid-19). *Prima Magistra: Jurnal Ilmiah Kependidikan*, 2(1), 9–15. <https://doi.org/10.37478/jpm.v2i1.732>
- Satrianingrum, A. P., & Prasetyo, I. (2021). Persepsi guru dampak pandemi Covid-19 terhadap pelaksanaan pembelajaran daring di PAUD (Teachers' perceptions of the impact of the Covid-19 pandemic on online learning implementation in early childhood education). *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(1), 633–640. <https://doi.org/10.31004/obsesi.v5i1.574>
- Shi, H., Han, X., Jiang, N., Cao, Y., Alwalid, O., Gu, J., Fan, Y., & Zheng, C. (2020). Radiological findings from 81 patients with COVID-19 pneumonia in Wuhan, China: A descriptive study. *The Lancet Infectious Diseases*, 20(4), 425–434. [https://doi.org/10.1016/S1473-3099\(20\)30086-4](https://doi.org/10.1016/S1473-3099(20)30086-4)

- Shi, S., Qin, M., Shen, B., Cai, Y., Liu, T., Yang, F., Gong, W., Liu, X., Liang, J., Zhao, Q., Huang, H., Yang, B., & Huang, C. (2020). Association of cardiac injury with mortality in hospitalized patients with COVID-19 in Wuhan, China. *JAMA Cardiology*, 5(7), 802–810. <https://doi.org/10.1001/jamacardio.2020.0950>
- Sohrabi, C., Alsafi, Z., O'Neill, N., Khan, M., Kerwan, A., Al-Jabir, A., Iosifidis, C., & Agha, R. (2020). World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International Journal of Surgery*, 76, 71–76. <https://doi.org/10.1016/j.ijvsu.2020.02.034>
- Suciati, P., & Syafiq, A. (2021). School from home (SFH): Perjuangan para orang tua siswa usia dini di masa pandemi Covid-19 (School from home: The struggle of parents of early childhood students during the Covid-19 pandemic). *Jurnal Sosial Humaniora Terapan*, 3(2), 7–16. <https://doi.org/10.7454/jsht.v3i2.129>
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D* (Quantitative, qualitative, and R&D research methods) (2nd ed.). Alfabeta.
- Suhardi, M., Albiy, R., Gistituati, N., & Marsidin, S. (2021). Analisis dampak regulasi pemerintah terhadap moda belajar daring di rumah bagi pelaku pendidikan di madrasah pada masa pandemi Covid-19 (Analysis of the impact of government regulation on home-based online learning modes for education actors in madrasahs during the Covid-19 pandemic). *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1849–1858. <https://doi.org/10.31004/edukatif.v3i4.684>
- Sundawa, D., Logayah, D. S., & Hardiyanti, R. A. (2021). New normal in the era of pandemic Covid-19 in forming responsibility social life and culture of Indonesian society. *IOP Conference Series: Earth and Environmental Science*, 747(1), Article 012068. <https://doi.org/10.1088/1755-1315/747/1/012068>
- Surahman, E., & Sulthoni. (2020). Student satisfaction toward quality of online learning in Indonesian higher education during the Covid-19 pandemic. In *Proceedings of the 2020 6th International Conference on Education and Technology (ICET)* (pp. 120–125). IEEE. <https://doi.org/10.1109/ICET51153.2020.9276630>
- Syafa'ati, J. S. N., Sucipto, S., & Roysa, M. (2021). Analisis prestasi belajar siswa pada pembelajaran daring di masa pandemi COVID-19 (Analysis of student learning achievement in online learning during the COVID-19 pandemic). *Jurnal Educatio FKIP UNMA*, 7(1), 122–128. <https://doi.org/10.31949/educatio.v7i1.882>
- Syarif, A., & Mawardi, I. (2021). Analisis kebijakan pembelajaran di masa pandemi Covid-19: Antara peluang dan tantangan serta dampaknya terhadap pendidikan Islam: Studi di SMP Muhammadiyah 1 Pati (Learning policy analysis during the Covid-19 pandemic: Between opportunities and challenges and their impact on Islamic education: A study at SMP Muhammadiyah 1 Pati). *Urecol Journal. Part A: Education and Training*, 1(1), 9–19. <https://doi.org/10.53017/ujet.20>
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5), Article 1729. <https://doi.org/10.3390/ijerph17051729>
- Widayati, A. (2021). Knowledge, perceptions, and awareness related to COVID-19 among the Indonesian adults during the outbreak's escalation period: A cross-sectional online survey in Yogyakarta Province, Indonesia. *Asia-Pacific Journal of Public Health*, 33(4), 448–450. <https://doi.org/10.1177/10105395211001655>
- Wulandari, D. R., & Fadhila, A. R. (2021). Peran orang tua terhadap perkembangan fisik-motorik anak usia sekolah dasar di masa pandemic Covid-19 (The role of parents in the physical-motor development of elementary school-age children during the Covid-19 pandemic). *Paradigma*, 11(1), 203–214. <https://ejournal.staimmgt.ac.id/index.php/paradigma/article/view/81>
- Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., Xiang, J., Wang, Y., Song, B., Gu, X., Guan, L., Wei, Y., Li, H., Wu, X., Xu, J., Tu, S., Zhang, Y., Chen, H., & Cao, B. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: A retrospective cohort study. *The Lancet*, 395(10229), 1054–1062. [https://doi.org/10.1016/S0140-6736\(20\)30566-3](https://doi.org/10.1016/S0140-6736(20)30566-3)