

# Teachers' leadership during the pandemic: balancing between students and professional needs

Indra Juharni<sup>1</sup>, Suyatno Suyatno<sup>2\*</sup>, Sugiarti Sugiarti<sup>3</sup>, and Uswah Uswah<sup>4</sup>

<sup>1</sup>Universitas Ahmad Dahlan, Yogyakarta, Indonesia

<sup>2</sup>Universitas Ahmad Dahlan, Yogyakarta, Indonesia

<sup>3</sup>Universitas Setia Budi Surakarta, Surakarta, Indonesia

<sup>4</sup>Universitas Muhammadiyah A.R Fachruddin, Tangerang, Indonesia

\*Corresponding author: [Suyatno@pgsd.uad.ac.id](mailto:Suyatno@pgsd.uad.ac.id)

## ARTICLE INFO

### Article history

Received January 30, 2026

Revised February 12, 2026

Accepted March 10, 2026

**Keywords:** Covid-19 Pandemic, professional needs, students' needs, teachers' leadership

### ABSTRACT

The Covid-19 pandemic caused learning loss for students at almost all educational levels, including elementary schools. Teachers' leadership is important in solving the various problems students face in learning during the pandemic. This study aimed to explore teachers' leadership in improving learning quality in elementary schools during the pandemic. The data collected using semi-structured interviews with ten teachers of elementary schools in Yogyakarta were analyzed through thematic analysis. The analysis showed two significant themes of teachers' leadership in improving learning quality during the pandemic in elementary schools. The two themes are to realize students' needs and professional development. The theme on realizing students' needs is formed by two sub-themes of convenience learning for students and serving their individual needs. Moreover, the theme for professional development is formed by four sub-themes. These move the organization, utilizing digital platforms, colleague collaboration, and innovation. The results showed that the implementation of teachers' leadership in elementary schools during the pandemic was oriented to students and professional needs. Therefore, teachers need to balance students and professional needs to improve learning quality.

## 1. INTRODUCTION

The Covid-19 pandemic caused learning loss for students at almost all educational levels, including elementary schools (Eacott et al., 2020). It forced a change from face-to-face to a distance learning system to reduce virus transmission. This change requires adaptation from the government, schools, parents, and students. The government was forced to take the relevant policies, teachers had to adopt distance learning strategies, and the parents' role in assisting learning at home was increasingly urgent. As users of educational services, students should participate in learning from home. However, they face various obstacles related to independent learning, the availability of infrastructure, and socio-economic challenges. During this period, students experienced many lost educational opportunities, resulting in decreased learning quality (Jena, 2020; Kathula, 2020). Various internal and external factors caused the decreasing learning quality during the Covid-19 pandemic. Internal factors from students include decreased motivation to learn (Faridah et al., 2020), boredom due to a lack of direct interaction with friends or teachers, too many tasks, and diminished interest (Irawan et al., 2020). External factors were inadequate infrastructure, less supportive signals and family socio-economic conditions, and

teachers' limitations in adopting online learning strategies (Irawan et al., 2020; Saetban, 2021). When this condition is left unchecked, it could further worsen the learning quality.

The quality of learning could be influenced by various variables, such as learning media (Harun et al., 2021), self-regulated learning (Zimmerman, 2002), teachers pedagogic competence (Hakim, 2015; Istiqomah et al., 2019; Susilowati & Suyatno, 2021), and infrastructure management (Siswanto & Hidayati, 2020). Other variables are teachers innovation and creativity (Lee, 2011), virtual laboratory management (Sun et al., 2008), learning methods (Kiswanto, 2017), and teachers leadership (Mardati et al., 2019). These variables could generally be grouped into three components. The first group is the students' self-component or learning independence. Second, the teachers' component includes teaching media, pedagogic competence, innovation and creativity, awareness in improving professional competence, and varied teaching methods. The third component is the learning environment, comprising infrastructure and laboratory management. During the Covid-19 pandemic, teachers leadership is important in responding to the needs of parents (Kidson, 2020). Teachers leadership during the pandemic included digital competence, collaboration, teaching approaches, methods, strategies, resource utilization, and appreciating students' success (Aslan et al., 2020). This leadership increases students' learning motivation (Öqvist & Malmström, 2018). In line with this, Zhang et al. (2022) stated that leadership is a powerful tool in enhancing professional learning inside and outside the school. Therefore, this aspect could indirectly influence students' learning behavior (Susanto & Rahayu, 2018) and achievement (Shen et al., 2020).

During the Covid-19 pandemic, learning is carried out in a distance system. Teachers must conduct learning optimally amid different conditions. They should determine appropriate, varied, effective, and efficient learning strategies, approaches, methods, and media. This ensures that students do not become bored of studying at home and are well-facilitated to participate in online learning. Studies in Korea and India found that several factors influenced students' learning outcomes during the Covid-19 pandemic. These factors included classroom interaction, students motivation, learning structure, teachers knowledge, and the availability of learning facilities (Baber, 2020). The sudden pandemic found all parties less prepared to deal with the condition. The main obstacles in implementing learning are the unstable internet and cost constraints, specifically for students whose parents have economic difficulties. Therefore, teachers are forced to improve their leadership through instructional learning (Giatman et al., 2020). Teachers leadership is vital in improving learning quality because the key to education reform lies in teachers (Lieberman & Pointer Mace, 2008). There is a close relationship between teachers leadership and learning quality (Damanik, 2019). Teachers' leadership relates to influencing students to increase motivation and improve learning quality. Marshall et al. (Marshall et al., 2020) suggested that teachers communicate effectively, work collaboratively, and use adaptive leadership during the Covid-19 pandemic. This would help address complex educational problems, including technological adaptations. In this case, teachers should attend training to improve online teaching competencies. They should often communicate with stakeholders effectively to improve learning quality in uncertain conditions. Furthermore, teachers could collaborate with parents, school committees, or outside parties to keep high learning quality during the pandemic. The uncertain conditions promote teachers to become adaptive to circumstances. Good planning could suddenly be canceled, necessitating increasing flexibility.

Aslan et al. (2020) formulated teachers' leadership during the Covid-19 pandemic as follows: spatial, retrospective, practical elaborative, collaborative, and interleaving learning, as well as concrete commitments, dual coding ability, useful resources, digital competencies, and

appreciation for success. Teachers need to invite students for reflective sessions in virtual learning (Sudarmo & Muslimah, 2020). This would increase the truth between students and teachers' and maintain curiosity. Additionally, reflective sessions establish constructive communication and increase students' ability to generate ideas and develop a deeper tolerance for others. Teachers self-efficacy and leadership are needed to increase students motivation (Malmström & Öqvist, 2021). The important role of teachers leadership in learning and its impact on school leadership (Hairon, 2017). Furthermore, Aslan et al. (2020) showed the teachers leadership developed during the Covid-19 pandemic. The leadership constituted spatial, retrospective, practical elaborative, collaborative, and interleaving learning approaches. It also encompassed concrete commitments, multiple coding abilities, useful resources, digital competencies, and an appreciation for success. A literature review showed that very few studies examined how teachers' leadership improves learning quality during the Covid-19 pandemic in elementary schools. Therefore, this study is important because some learning dynamics were not completed properly during the pandemic. Students in elementary schools' children experience the highest vulnerability compared to other education age ranges. The results could be a recommendation for teachers and school principals in facing the dynamic learning challenges due to the pandemic.

## 2. METHODS

Qualitative studies described and interpreted social phenomena (Holloway & Galvin, 2016). This was conducted on ten teachers of elementary schools in Yogyakarta taken using a purposive sampling technique (Andrade, 2021; Campbell et al., 2020; Etikan et al., 2016). The participants fulfilled the following criteria: teachers at elementary schools in Yogyakarta voluntarily participated in the study and had at least three years of teaching experience. All informant names were written using codes (P1-P10) to maintain anonymity as a fulfilment of social study ethics (Young, 2017). This study obtained permission from the education offices managing the schools where the participants work. The education office granted permission and provided a copy to the schools. Semi-structured interviews (Aleandri & Russo, 2015; Kallio et al., 2016; Newcomer et al., 2015) were conducted based on a guide developed following the general framework of individual, team, and organizational leadership (Schott et al., 2020). The interview used five questions as a guideline, such as 1) Why is teachers' leadership important during a crisis, specifically in the current COVID-19 era? 2) What are interesting experiences in implementing team leadership to find new ideas and motivate other teachers to improve learning quality during the Covid-19 pandemic?

The data were analyzed using thematic analysis by developing themes as collected data patterns (Morgan, 2022). Themes or patterns are described as the end product of the thematic analysis (Braun et al., 2017). The data were analyzed in the first stage by open-coding raw interview data (Robson & McCartan, 2016). This stage aimed to identify examples when participants explained the teachers' leadership practices in improving learning quality during the pandemic. The second stage was analytic coding by connecting and breaking similar codes to obtain conclusions from the data coded in the first stage (Robson & McCartan, 2016). This process resulted in two important themes: 1) Teachers leadership to realize students' needs formed by two themes, such as serving the students' individual needs. 2) Teachers' leadership for professional development is formed by four themes, such as colleague collaboration.

### 3. RESULTS AND DISCUSSION

#### RESULTS

The analysis showed two significant themes of teachers' leadership in improving learning quality during the pandemic in elementary schools. The two themes are to realize students' needs and professional development. The theme on realizing students' needs is formed by two sub-themes of convenience learning for students and serving their individual needs. Moreover, the theme for professional development is formed by three sub-themes. These move the organization, utilizing digital platforms, colleague collaboration, and innovation, as explained in Table 1.

**Table 1.** Data Analysis

Theme	Sub-theme	Number of Participants
Teachers' leadership to realize students' needs	Convenience learning for students	10
	Serving individual students' needs	8
Teachers' leadership to realize professional development	Moving the organization	10
	Utilizing digital platforms	9
	Colleague Collaboration	8
	Teachers' innovation	8

#### 3.1 Teachers' leadership to realize students' needs

All participants mentioned that their leadership during the pandemic ensured that students could follow the learning process well. This theme comprises three sub-themes, including convenience learning for students, serving their needs, and learning being more meaningful, as stated by ten, eight, and six participants, respectively.

##### *Convenience learning for students*

The COVID-19 pandemic has caused enormous challenges for students in elementary schools. The sudden change from offline to online learning causes students to be unprepared regarding learning infrastructure, internet networks, the use of online learning tools, and mental readiness to face online learning. This situation requires teachers to ensure that students continue to learn. A participant called R4 stated that: The family has only one cell phone owned by parents and cannot always be used for their children's learning. It is used by parents to work, and the students cannot use it in the morning until noon or in the evening because parents work all day long. In the end, students take lessons at night in tired and sleepy conditions [R4]. Some students lack cell phones to support the learning process due to a lack of prior preparation. They are forced to share with their parents after finishing work. Such conditions cause teachers to ensure that students continue following the learning process. Through the interview, R4 continued: I offer an alternative for students to still access learning, where parents take materials and assignments at school and collect them the next day. When there are still obstacles to taking the material to school for some reason, I deliver the material to their house. Therefore, learning is carried out by all students, including those constrained in accessing online learning [R4].

Similar experiences were also shared by other participants. During the pandemic, students face many instrumental obstacles, such as not having cellphones [R2, R6], sharing cellphones with parents [R4, R7], the weak signal at home [R1, R3, R8], and difficulty using the online learning platform because they are unskilled [R5, R10]. Therefore, teachers should utilize their leadership to motivate, mobilize, assist and find solutions to provide convenient learning. Through

interviews, R6 and R7 stated that: Teachers should design and implement learning using the students' facilities [R6]. During the pandemic, I used simple technology according to students' abilities. This is because technology has become inseparable from the nature of current students [R7].

### ***Serving individual students' needs***

During the pandemic, students require services based on their individual learning needs. Giving individual students' services is a big challenge for teachers, even in regular learning. During the pandemic, these demands become bigger and more difficult because teachers encounter more learning constraints. Through interviews, R7 explained that: I try to facilitate students according to their interests, talents, profiles, and learning styles by applying differentiated learning [R7]. R7 accomplished differentiated learning as an alternative to serving different students' needs that have become significant. This is reflected in their talents, interests, learning styles, ownership, and readiness to learn information technology. R8 explained that: One student did not understand the material at the beginning of semester one after learning mathematics through zoom meeting. The parent had taught his child until he became angry. We explained it again through a private zoom meeting. The student could understand the material after it was explained again. The parent was grateful and made a status on WhatsApp [R8]. R8's experience showed that teachers should also provide private treatment during the pandemic because some students cannot understand the material. R8 continued: Finally, I guided the drawing through a video call in the afternoon, and he could draw very well. This experience occurred several times. Usually, we take turns with partner teachers in the classroom to provide remedial teaching services when needed [R8].

## **3.2 Teachers leadership for professional development**

Teachers need professional development during the pandemic to maintain a quality learning process. The need for teachers' professional development is more urgent than in previous times because the challenges are becoming tougher. The teachers in this study utilized their leadership to develop their professionalism. Ten participants mobilized the organization, nine collaborated with colleagues, while eight utilized digital platforms and learning innovations.

### ***Mobilizing the organization***

Mobilizing the organization is an important implementation of teachers' leadership from the participants during the pandemic to increase their competence in improving learning quality. For instance, it is carried out by teachers at the school organizational level [R1, R3, R7, R10], TWG [R2, R3, R4, R6], and Indonesian teachers associations [R5, R8]. In an interview, R3 stated: Teachers should work individually and collectively to overcome challenges, as well as teaching and learning innovations. It is carried out for students and parents. Therefore, teachers' leadership must be applied during a crisis [R3]. Similarly, R6 also conveyed as follows: Teachers' leadership by mobilizing organization is actively applied in TWG activities, being a TWG administrator, and sharing knowledge with 6th-grade teachers' colleagues. We formed groups consisting of Indonesian, Mathematics, and Science subjects as a team. We formulated master questions to be used by all elementary schools in one group [R6]. The statements by R3 and R6 showed the importance of mobilizing organizations to deal with challenges faced by teachers during the pandemic crisis. R4 also stated as follows: Because one of the fields I specialize in is visual design, I inspire and move my fellow teachers to optimize learning with graphic design. Some young teachers are interested in learning because it is easy to understand the tools in the application. However, only a few senior teachers are willing to participate [R4].

### ***Colleague Collaboration***

The participants used their leadership with colleague collaboration to increase students' learning motivation. They invited teachers to use learning features, create media, serve individual differences, design thematic lessons, and prepare learning videos, ice-breaking, and learning materials. Through interviews, R9 stated that: During the COVID-19 period, we collaborate with fellow teachers in planning and running online model learning. This collaboration makes the work lighter and helps each other. In our school, class IV consists of A, B, and C, and we, as homeroom teachers, discuss the targeted material at the beginning of the learning year. We also work together in making learning media to be delivered to students [R9].

Referring to R9, colleague collaboration has helped them lighten the workload and the challenges of thinking and working together. Furthermore, this collaboration could solve other teachers' problems in online learning. Through interviews, R6 explained that: Not all teachers master technology, necessitating cooperation between teachers in determining new ideas. Technology-savvy teachers guide old teachers to make distance learning according to the school's targets [R6]. Other teachers also mentioned that colleague collaboration has helped them overcome various obstacles during online learning. Collaboration has helped them increase students' motivation [R2], utilize learning features [R1, R5], and provide additional lesson hours for students with disabilities [R6, R10]. Furthermore, teachers compile integrative thematic learning, make interesting media [R4, R7], and create appropriate assignments for online learning [R8].

### ***Improve the ability to utilize digital platforms***

Improving the ability to utilize digital platforms is an implementation of teachers' leadership in developing their professionalism. The ability to improve the digital platform is accomplished in various ways, as stated by R2: The most important skill during this pandemic is utilizing online learning platforms. Many teachers use digital platforms during this pandemic. Therefore, our school principal emphasizes that teachers improve their ability to utilize digital platforms in various ways [R2].

R2's statement was reinforced by R4 that teachers need technological skills. They should be technology literate, specifically during this crisis. R4 explained that: Good teachers' leadership also includes technological skills. Teachers should be technology literate to conduct online learning during a crisis properly. Through technology mastery, teachers easily direct and guide their students to accept the materials delivered. Teachers should apply innovations in the knowledge transfer process, meaning they also support their leadership in learning [R4]. Other participants also agreed that teachers' leadership in times of crisis should improve their ability to utilize digital platforms in learning. These platforms include Google Forms, Sites, Google Slides, Google Meet, Google Classroom, and jam board [R1, R5]. Teachers should also use learning management systems, interactive videos [R3], Google forms [R6], quizzes, live worksheets, games [R8], and YouTube [R9].

### ***Improve the ability to make learning innovations***

Teachers must innovate learning during the pandemic by trying new things. They must also experiment continuously to find the best ways to improve the quality of the online learning process. A total of 80% of participants supported this theme. Through interviews, R3 explained that: Teachers must make innovations during a pandemic to solve learning problems. I innovate in various ways using the principle of trying first and obtaining the results. Also, I often innovate

in using strategies and methods interesting to students, as well as using creative media to teach [R3]. R3 stated that innovation is necessary for teachers to solve students' problems during the pandemic. R4 supported this statement: The pandemic has forced us to use the new online learning model. Therefore, teachers' leadership is indispensable to making innovations and ensuring learning during the pandemic with this new model runs well. Teachers should ensure that all students participate in online learning well. They should provide solutions to online learning obstacles for students with inadequate support [R4]. For R4, ensuring that learning runs smoothly during a pandemic requires teachers' innovation. R8 also stated that: When one parallel teachers find something new and interesting to use, we share and apply it in virtual learning and assignments. The pandemic has motivated us to try new things in learning that would not likely be done under normal conditions [R8].

The participants' acknowledgement showed that teachers' ability and willingness to implement innovations is the key to online learning success during the pandemic. By optimizing their leadership, teachers must motivate, try, and experiment to find alternatives to improving learning quality during the pandemic.

## DISCUSSION

This study explored the leadership of teachers in elementary schools in Yogyakarta in developing learning quality during the pandemic. The data analysis showed two important findings. First, teachers' leadership during the pandemic is directed at students' needs to feel convenience in learning. Second, the leadership is oriented towards fulfilling professional needs by mobilizing organizations, collaborating with colleagues, utilizing digital platforms, and creating innovations. The first finding showed that students' needs are a major concern in the teachers' leadership of elementary schools during the pandemic. Students' needs are a description of curriculum development. The pandemic has resulted in major changes in learning and influenced the behavior of students and teachers, necessitating support from schools (Carreon & Manansala, 2021). Therefore, schools need to improve services to students during the pandemic. Gin et al. (2022) found that online learning modes are a problem for students with disabilities. This requires online learning recommendations to accommodate students' needs. One aspect of students' needs during the pandemic is convenience in learning. This is in line with (Dewantoro & Rachmawati, 2020) that students' negative perceptions press teachers to integrate online learning technology, content, and pedagogic development to provide convenience. Learning convenience is indicated by the balance of facilities owned by students and schools and ease of access to online learning (Hamdani & Priatna, 2020). Furthermore, students with special needs require an online learning model different. Those with low cognitive abilities also need a separate remedial teaching program.

The second finding explained that teachers' leadership is oriented to teachers' professional needs to improve their teaching professionalism during the pandemic. It is carried out through mobilizing organizations, collaborating with colleagues, utilizing digital platforms, and making learning innovations. This finding strengthened the theory and previous studies that teachers professionalism is a must for creating meaningful learning during a pandemic (Ristiani, 2021). Similarly, Kim et al. (2022) stated that teachers professional development optimizes learning quality during the pandemic. This professionalism includes teachers' leadership in driving organizations, colleague collaboration, utilizing digital platforms, and making learning innovations. Adaptation to learning during the pandemic moves teachers' enthusiasm to share in schools and wider organizations. This is shown in the teachers' role in the TWG and Teachers Motivator (TM) to fill the professional needs. Teachers collaborate with colleagues, share, and

provide input on effective learning in distance learning mode. Utilization of digital platforms during distance learning is a requirement. Moreover, professional teachers operate various digital platforms to achieve the expected learning goals. Innovation is an absolute factor in avoiding boredom during learning and finding the best strategy for completing professional needs. These four indicators of teachers' leadership are needed to improve learning quality during a pandemic. According to Harris (2013), teachers leadership is believed to improve learning quality. The findings emphasized the importance of teachers' leadership in improving learning quality during the Covid-19 pandemic. The theoretical and practical recommendations are that teachers' leadership could be carried out based on students and professional needs. This implies convenience in learning and serving students according to individual needs. Regarding professional needs. Teachers' leadership should incorporate organizational leadership, colleague collaboration, utilization of digital platforms, and learning innovation.

#### 4. CONCLUSION

The pandemic requires teachers to use alternatives to solve the problems faced by students. They must also motivate, move, and influence the people around them, including students and colleagues at school or in organizations in a wider scope. The findings emphasized the importance of balancing teachers' leadership based on students and professional needs. Teachers' leadership oriented to students needs ensures the continuity of learning quality, enabling students to study comfortably while fulfilling their individual needs. Leadership oriented to professional needs bridges the gap between the teachers' competencies and the increasing demands to use information technology in learning due to the Covid-19 outbreak. Subsequently, teachers must balance leadership oriented to students and professional needs to improve learning quality in elementary schools. This study only examined the teachers' perspectives without including the students and parents. Therefore, future studies could investigate teachers' leadership based on the perspectives of students and parents to produce holistic and multi-perspective findings.

#### 5. ACKNOWLEDGEMENTS

The authors are grateful to the Directorate of Research and Community Service at the Ministry of Education, Culture, Research, and Technology for funding this study with contract number: 017/PB.PTM/ BRIn.LPPM / VI /2023.

#### 6. REFERENCES

- Aleandri, G., & Russo, V. (2015). Autobiographical questionnaire and semi-structured interview: Comparing two instruments for educational research in difficult contexts. *Procedia-Social and Behavioral Sciences*, 197, 514–524.
- Andrade, C. (2021). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine*, 43(1), 86–88.
- Aslan, A., Silvia, S., Nugroho, B. S., Ramli, M., & Rusiadi, R. (2020). Teacher'S Leadership Teaching Strategy Supporting Student Learning During the Covid-19 Disruption. *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam*, 5(3), 321–333. <https://doi.org/10.31538/ndh.v5i3.984>
- Baber, H. (2020). Determinants of students' perceived learning outcome and satisfaction in online learning during the pandemic of Covid19. *Journal of Education and E-Learning Research*, 7(3), 285–292. <https://doi.org/10.20448/Journal.509.2020.73.285.292>
- Braun, V., Clarke, V., Braun, V., & Clarke, V. (2017). *Applied Qualitative Research in Psychology*.

- Applied Qualitative Research in Psychology*, 0887(2006). <https://doi.org/10.1057/978-1-137-35913-1>
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652–661. <https://doi.org/10.1177/17449871209272>
- Carreon, A. D. V., & Manansala, M. M. (2021). Addressing the psychosocial needs of students attending online classes during this Covid-19 pandemic. *Journal of Public Health*, 43(2), e385–e386.
- Damanik, R. (2019). Hubungan Kepemimpinan Dengan Mutu Pembelajaran. *Jurnal Serunai Administrasi Pendidikan*, 8(1).
- Dewantoro, A., & Rachmawati, I. (2020). Analysis of evaluation and exploratory studies on student's resilience of online learning during pandemic of covid-19. *Konseli: Jurnal Bimbingan Dan Konseling (E-Journal)*, 7(2), 155–162.
- Eacott, S., MacDonald, K., Keddie, A., Blackmore, J., Wilkinson, J., Niesche, R., Gobby, B., & Fernandez, I. (2020). Covid-19 and Inequities in Australian Education – Insights on Federalism, Autonomy, and Access. *International Studies in Educational Administration*, 48, 6–15.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
- Faridah, I., Sari, F. R., Wahyuningsih, T., Oganda, F. P., & Rahardja, U. (2020). Effect Digital Learning on Student Motivation during Covid-19. *2020 8th International Conference on Cyber and IT Service Management (CITSM)*, 1–5.
- Giatman, M., Siswati, S., & Basri, I. Y. (2020). Online learning quality control in the pandemic Covid-19 era in Indonesia. *Journal of Nonformal Education*, 6(2), 168–175.
- Gin, L. E., Pais, D. C., Parrish, K. D., Brownell, S. E., & Cooper, K. M. (2022). New online accommodations are not enough: the mismatch between student needs and supports given for students with disabilities during the Covid-19 pandemic. *Journal of Microbiology & Biology Education*, 23(1), e00280-21.
- Hairon, S. (2017). Teacher leadership in singapore: The next wave of effective leadership. *Research in Educational Administration and Leadership*, 2(2), 170–194. <https://doi.org/10.30828/real/2017.2.3>
- Hakim, A. (2015). Contribution of competence teacher (pedagogical, personality, professional competence and social) on the performance of learning. *The International Journal of Engineering and Science*, 4(2), 1–12.
- Hamdani, A. R., & Priatna, A. (2020). Efektifitas implementasi pembelajaran daring (full online) dimasa pandemi Covid-19 pada jenjang Sekolah Dasar di Kabupaten Subang. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, 6(1), 1–9.
- Harris, A. (2013). Teacher leadership and school improvement. In *Effective leadership for school improvement* (pp. 82–93). Routledge.
- Harun, F., Hairun, Y., Machmud, T., & Alhaddad, I. (2021). Improving Students' Mathematical Communication Skills through Interactive Online Learning Media Design. *Journal of Technology and Humanities*, 2(2), 17–23.
- Holloway, I., & Galvin, K. (2016). *Qualitative research in nursing and healthcare*. John Wiley & Sons.
- Irawan, A. W., Dwisona, D., & Lestari, M. (2020). Psychological Impacts of Students on Online Learning During the Pandemic Covid-19. *Konseli: Jurnal Bimbingan Dan Konseling (E-Journal)*, 7(1), 53–60. <https://doi.org/10.24042/kons.v7i1.6389>
- Istiqomah, A. N., Suyatno, S., & Maryani, I. (2019). The Effect of Teacher Competencies on Student

- Achievement in Vocational High School. *International Journal of Education*, 11(4), 1. <https://doi.org/10.5296/ije.v11i4.15625>
- Jena, P. K. (2020). Impact of pandemic COVID-19 on education in India. *International Journal of Current Research (IJCR)*, 12.
- Kallio, H., Pietilä, A., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), 2954–2965.
- Kathula, D. N. (2020). Effect of COVID-19 pandemic on the education system in Kenya. *Journal of Education*, 3(6).
- Kidson P, Lipscombe K, T.-F. S. (2020). Co-designing Educational Policy: Professional Voice and Policy Making Post-COVID. *International Studies in Educational Administration*, 48, 16–22.
- Kim, L. E., Oxley, L., & Asbury, K. (2022). What makes a great teacher during a pandemic? *Journal of Education for Teaching*, 48(1), 129–131.
- Kiswanto, A. (2017). The effect of learning methods and the ability of students think logically to the learning outcomes on natural sciences of grade ivs student. *9th International Conference for Science Educators and Teachers (ICSET 2017)*, 1040–1046.
- Lee, Y.-J. (2011). A study on the effect of teaching innovation on learning effectiveness with learning satisfaction as a mediator. *World Transactions on Engineering and Technology Education*, 9(2), 92–101.
- Lieberman, A., & Pointer Mace, D. H. (2008). Teacher learning: The key to educational reform. *Journal of Teacher Education*, 59(3), 226–234.
- Malmström, M., & Öqvist, A. (2021). Constructing an Entrepreneurial Identity: How Enterprise Intentions Among Young People are Motivationally Formed. *Entrepreneurship Research Journal*.
- Mardati, A., Suyatno, S., & Pambudi, D. I. (2019). The influence of teacher leadership and teacher values on students learning readiness at junior high school in pangkalpinang ci ty. *International Journal of Scientific and Technology Research*, 8(10), 3311–3416.
- Marshall, J., Roache, D., & Moody-Marshall, R. (2020). Crisis Leadership: A Critical Examination of Educational Leadership in Higher Education in the Midst of the COVID-19 Pandemic. *International Studies in Educational Administration*, 48, 30–38.
- Morgan, H. (2022). Understanding thematic analysis and the debates involving its use. *The Qualitative Report*, 27(10), 2079–2091. <https://doi.org/10.46743/2160-3715/2022.5912%0Ahttps://nsuworks.nova.edu/tqr/vol27/iss10/2/>
- Newcomer, K. E., Hatry, H. P., & Wholey, J. S. (2015). Conducting semi-structured interviews. *Handbook of Practical Program Evaluation*, 492, 492. <https://doi.org/https://doi.org/10.1002/9781119171386.ch19>
- Öqvist, A., & Malmström, M. (2018). What motivates students? A study on the effects of teacher leadership and students' self-efficacy. *International Journal of Leadership in Education*, 21(2), 155–175.
- Ristiani, I. (2021). Development of context-based meaningful learning in the era of pandemic covid-19. *International Conference on Education of Suryakencana (IConnects Proceedings)*.
- Robson, C., & McCartan, K. (2016). *Real world research (4th ed.)*.
- Saetban, A. A. (2021). Faktor Penghambat Siswa Sekolah Dasar dalam Meningkatkan Prestasi Belajar di Masa Pandemi COVID-19. *Jurnal Ilmu Pendidikan (JIP) STKIP Kusuma Negara*, 13(1), 58–66.
- Schott, C., van Roekel, H., & Tummers, L. G. (2020). Teacher leadership: A systematic review,

- methodological quality assessment and conceptual framework. *Educational Research Review*, 31, 100352.
- Shen, J., Wu, H., Reeves, P., Zheng, Y., Ryan, L., & Anderson, D. (2020). The association between teacher leadership and student achievement: A meta-analysis. *Educational Research Review*, 31, 100357.
- Siswanto, E., & Hidayati, D. (2020). Management indicators of good infrastructure facilities to improve school quality. *International Journal of Educational Management and Innovation*, 1(1), 69–81.
- Sudarmo, S., & Muslimah, M. (2020). Teacher's leadership competency in managing online instruction during the pandemic disruption in Indonesia. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, 5(3), 430–445.
- Sun, K., Lin, Y., & Yu, C. (2008). A study on learning effect among different learning styles in a Web-based lab of science for elementary school students. *Computers & Education*, 50(4), 1411–1422.
- Susanto, R., & Rahayu, R. (2018). Pengaruh kepemimpinan guru dan keterampilan manajemen kelas Terhadap Perilaku Belajar Sisw Kelas IV. *Jurnal Pendidikan Dasar Perkhasa*, 4(2), 220–229.
- Susilowati, W. W., & Suyatno, S. (2021). Teacher competence in implementing higher-order thinking skills oriented learning in elementary schools. *Premiere Educandum: Jurnal Pendidikan Dasar Dan Pembelajaran*, 11(1), 1. <https://doi.org/10.25273/pe.v11i1.7762>
- Young, G. (2017). *Revising the APA ethics code*. Springer.
- Zhang, M., Walker, A. D., & Qian, H. (2022). Teacher leadership for professional learning: a case study of a master teacher studio in Zhejiang Province, China. *Professional Development in Education*, 1–16.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64–70.