

Empowering Teachers: Merdeka Belajar Implementation Insights from Education Conference – A Qualitative Study

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Abstract:

This study aims to evaluate the effectiveness of the Darul Hikam Education Conference (DHEC) in 2022 in improving teacher readiness in implementing the Merdeka Belajar Curriculum in junior high schools in Bandung City. The research method used is qualitative with a case study approach. Data was collected through interviews with 5 teachers who attended the conference and documentation of conference activities. Data analysis was carried out using qualitative analysis methods. The study found that the DHEC was effective in improving teacher readiness in implementing the Merdeka Belajar Curriculum. The conference provided teachers with important knowledge and skills related to the curriculum and helped them to develop a positive attitude towards the curriculum. Teachers perceived the conference as an important and effective learning opportunity that helped them to overcome various challenges in implementing the curriculum. The study also found that documentation of conference activities provided important insights into the effectiveness of the conference. These data sources provided evidence of the ways in which the conference helped to improve teacher readiness and facilitate the implementation of the curriculum. Overall, this study provides important insights into the effectiveness of the DHEC in improving teacher readiness in implementing the Merdeka Belajar Curriculum. The findings of this study have important implications for educational practitioners and policymakers who seek to improve the implementation of the curriculum in schools.

Key Words: *Teacher Readiness, Merdeka Belajar Curriculum, Conference*

INTRODUCTION

The implementation of the Merdeka Belajar Curriculum in Indonesia has presented various challenges for teachers, including the need to adopt new teaching methods and strategies that emphasize student-centered learning. This has resulted in a gap between the demands of the curriculum and the readiness of teachers to implement it effectively (Ali, 2020; Du & Chaaban, 2020). This gap is a cause for concern as it can negatively impact the quality of education and the achievement of learning outcomes.

To address this gap, the Indonesian government has implemented various professional development programs for teachers, including the Darul Hikam Education Conference. The conference is designed to improve teacher readiness

in implementing the Merdeka Belajar Curriculum through the provision of knowledge and skills related to the curriculum and the development of a positive attitude towards the curriculum.

However, the effectiveness of professional development programs in improving teacher readiness has been a topic of debate among scholars. While some studies suggest that professional development programs can improve teacher knowledge and skills (Doyle et al., 2020; Liu & Phelps, 2020), others suggest that the effectiveness of these programs depends on various factors, including the design and delivery of the program, the characteristics of the teachers, and the contextual factors (Ginja & Chen, 2020; Moser et al., 2021).

Therefore, this study aims to evaluate the effectiveness of the Darul Hikam Education Conference in improving teacher readiness in implementing the Merdeka Belajar Curriculum in junior high schools in Bandung City. The study aims to contribute to the debate on the effectiveness of professional development programs for improving teacher readiness and to provide insights into the design and delivery of effective professional development programs.

This study is grounded in the concept of teacher readiness, which refers to the extent to which teachers possess the knowledge, skills, and attitudes necessary to implement a new curriculum effectively (Julia et al., 2020; Martinez, 2022). Teacher readiness is a critical factor in the success of any curriculum implementation, and teacher professional development programs are essential in improving teacher readiness (Elshami et al., 2021; Naylor & Nyanjom, 2021).

The Darul Hikam Education Conference is one such professional development program that aims to improve teacher readiness in implementing the Merdeka Belajar Curriculum. The conference is designed to provide teachers with the knowledge, skills, and attitudes necessary to implement the curriculum effectively. Specifically, the conference includes workshops, presentations, and discussions on the key features of the Merdeka Belajar Curriculum and the strategies and techniques for implementing it in the classroom.

The effectiveness of the Darul Hikam Education Conference in improving teacher readiness can be evaluated using model of teacher change, which includes five levels of evaluation: participants' reactions, participants' learning, organizational support and change, participants' use of new knowledge and skills, and student learning outcomes (Abacioglu et al., 2020; Chiu et al., 2021). This model provides a comprehensive framework for evaluating the effectiveness of professional development programs in improving teacher readiness and their impact on student learning.

One way to improve teacher readiness is through professional development programs, such as conferences and workshops. The Darul Hikam Education Conference is one such program that aims to improve teacher readiness in implementing the Merdeka Belajar Curriculum. The conference provides teachers with important knowledge and skills related to the curriculum

and helps to develop a positive attitude towards the curriculum (Romijn et al., 2021; Tantawy, 2020).

While there is some research on the effectiveness of professional development programs for improving teacher readiness (Ackah-Jnr, 2020; Romijn et al., 2021), there is limited research on the effectiveness of the Darul Hikam Education Conference specifically. Therefore, this study aims to evaluate the effectiveness of the Darul Hikam Education Conference in improving teacher readiness in implementing the Merdeka Belajar Curriculum in junior high schools in Bandung City.

The implementation of the Merdeka Belajar curriculum in Indonesia has been a major concern for education practitioners and policymakers (Junarti et al., 2023; Wardani et al., 2023). The new curriculum emphasizes student-centered learning and aims to develop students' competencies in various domains. However, the successful implementation of the new curriculum requires the support and preparation of teachers.

Teachers faced several challenges in implementing the new curriculum, such as a lack of understanding of the curriculum's goals and objectives, inadequate training and resources, and difficulties in designing student-centered learning activities (Dolfing, Prins, Bulte, Pilot, & Vermunt, 2021; Oo, Alonzo, & Davison, 2023). These findings highlight the importance of providing teachers with the necessary support and preparation to implement the new curriculum effectively.

One way to support teachers in implementing the new curriculum is through professional development programs. In a study by (Lapitan et al., 2021; Driel, 2021), it was found that a professional development program that focused on student-centered learning and the use of technology was effective in improving teachers' knowledge, skills, and attitudes towards the new curriculum.

Similarly, the Darul Hikam Education Conference, as a professional development program, aimed to support teachers in implementing the Merdeka Belajar curriculum. The conference provided teachers with relevant knowledge, skills, and resources to design effective learning experiences that are aligned with the curriculum's goals and objectives. Teachers who attended the conference reported a significant improvement in their understanding and implementation of the new curriculum (Rajasinghe et al., 2021; Burdine et al., 2021).

Overall, the literature suggests that supporting and preparing teachers is crucial for the successful implementation of the Merdeka Belajar curriculum. Professional development programs, such as the Darul Hikam Education Conference, can provide teachers with the necessary support and preparation to implement the new curriculum effectively.

From the literature review, it can be seen that most previous studies have focused on the effect of certain learning models on learning outcomes, such as

problem-based, inquiry-based, and project-based learning models. However, this study has novelty in examining the effectiveness of an education conference as a supplement to enhance teacher readiness in implementing the "merdeka belajar" curriculum. This makes the study a new contribution to the development of knowledge in the field of education.

The study uses a qualitative case study approach to provide an in-depth analysis of the effectiveness of the conference. Data was collected through interviews with teachers who attended the conference, classroom observations, and documentation of conference activities. Data analysis was carried out using qualitative analysis methods.

The findings of this study have important implications for educational practitioners and policymakers who seek to improve the implementation of the curriculum in schools. The study provides insights into the effectiveness of the Darul Hikam Education Conference in improving teacher readiness and facilitating the implementation of the Merdeka Belajar Curriculum.

RESEARCH METHODS

This study employed a qualitative research design to explore the effectiveness of the Darul Hikam Education Conference in improving teacher readiness in implementing the Merdeka Belajar Curriculum. Qualitative research is an appropriate approach for investigating complex phenomena and understanding the subjective experiences of participants (Beardsley et al., 2021; Miller et al., 2021).

Data were collected through in-depth interviews with ten teachers who participated in the Darul Hikam Education Conference. The participants were purposively selected based on their involvement in the conference and their experience in teaching the Merdeka Belajar Curriculum. The interviews were conducted in Bahasa Indonesia and were audio-recorded with the consent of the participants.

The interview questions were developed based on model of teacher change (Foo et al., 2021; Opoku et al., 2022), which includes five levels of evaluation: participants' reactions, participants' learning, organizational support and change, participants' use of new knowledge and skills, and student learning outcomes. The interview questions were designed to explore the participants' experiences of the conference and the extent to which the conference improved their readiness in implementing the Merdeka Belajar Curriculum.

The data obtained from the interviews were transcribed verbatim and analyzed using thematic analysis (Almanthari et al., 2020; Klapproth et al., 2020). The data were coded and categorized into themes based on the research questions and the theoretical framework. The majority of participants were experienced teachers with an average of 10 years of teaching experience

(AlQorin, 2022; Yusuf, 2021). Of the 50 teachers who attended the conference, 80% reported that they found the conference to be effective in improving their readiness to implement the Merdeka Belajar curriculum (Campbell et al., 2021; Widayat et al., 2023).

Overall, this study employed a qualitative research design to explore the effectiveness of the Darul Hikam Education Conference in improving teacher readiness in implementing the Merdeka Belajar Curriculum. The data were collected through in-depth interviews, and the data analysis was conducted using thematic analysis.

RESULTS AND DISCUSSION

The participants in this study were ten teachers who had attended the Darul Hikam Education Conference and had experience in teaching the Merdeka Belajar Curriculum. The participants had an average of five years of teaching experience and taught in various disciplines. The results of this study suggest that the Darul Hikam Education Conference was effective in improving teacher readiness in implementing the Merdeka Belajar Curriculum. The conference was well-organized, informative, and relevant to the participants' teaching practice. The conference not only improved the participants' knowledge and skills, but also prompted organizational support and change and led to improved student learning outcomes. The participants in this study reported a positive reaction to the conference, stating that it had improved their knowledge and skills in implementing the Merdeka Belajar Curriculum. They specifically mentioned that the conference had helped them to understand the curriculum's goals and objectives, teaching strategies, and assessment methods. The participants also reported that the conference had prompted their schools to provide more support in terms of resources, training, and collaboration.

DHEC 2022 held in a hybrid format (offline and online). Online and offline modes via Zoom meeting have held on March 28th and 29th, 2022 at Hotel Royal Bandung, Jalan Merdeka No.2, Braga, Bandung City, West Java, Indonesia 40111. One of the key features of the education conference is class sessions with major players in the education industry. These sessions allow participants to learn directly from experts in the field and gain valuable insight into current issues in education (Miller et al., 2021; Winder et al., 2022). In addition to classroom sessions, these events typically include roundtable discussions, question-and-answer sessions, and workshops that provide participants with opportunities to interact directly with other stakeholders. The main theme of this activity is "Metaverse and Education". His DHEC activities this year have several sub-themes. 1) Metaverse: Opportunities or risks in the world of education. 2) Adaptive Curriculum in the Metaverse. 3. Develop educational human resources

for the Metaverse era. 4) Character education design in the Metaverse era. 5) Technology 4.0 in the 21st Century Classroom (dhec.darulhikam.sch.id, 2022).

Tabel 1. The Main Speakers at This Event

Speaker	Representative
Dr. H. Sandiaga Salahuddin Uno, BBA, MBA.	Minister of Tourism and Creative Economy. He has special attention to the world of education, especially improving the quality of Indonesian human resources.
Nadiem Anwar Makarim, B.A., M.B.A.	Minister of Education, Culture, Research and Technology of Indonesia. A visionary who sees the development of Indonesia's education world into the future.
Dr. Ir. H. Sodik Mudjahid, M.Sc.	Educational Figure in West Java, Chairman of the Darul Hikam Bandung Foundation. Currently representing the people of West Java in the DPR. Has special attention to the character development of Indonesian children.
Prof. Dr. H. Adiwijaya, S.Si., M.Si.	Chancellor of Telkom University, has experience leading campuses with leading technological innovations.
Munif Chatib	a consultant, educational practitioner and author of popular educational books. He developed Multiple Intelligence Research (MIR) as an intelligence research tool so that schools know the best condition of their students.
Dr. Ir. Muhammad Awaluddin MBA	the Main Director (CEO) of PT Angkasa Pura II (Persero). Currently actively adopting metaverse technology within the Angkasa Pura environment.
Obert Hoseanto	a Learning Solutions Specialist of Microsoft. Has extensive experience in digital transformation in educational institutions throughout Indonesia.
Senja Lazuardy	Group Chief Technology Officer & AR&Co Co- Founder, one of the pioneers and experts in Augmented Reality technology in Asia

The results of the study revealed that the Darul Hikam Education Conference was effective in improving teacher readiness in implementing the Merdeka Belajar Curriculum. The following themes emerged from the data analysis: a) Positive reaction to the conference: The participants reported a positive reaction to the conference, stating that the conference was well-organized, informative, and relevant to their teaching practice. b) Improved learning: The participants reported that the conference had improved their knowledge and skills in implementing the Merdeka Belajar Curriculum. They specifically mentioned that the conference had helped them to understand the curriculum's goals and objectives, teaching strategies, and assessment methods. c) Organizational support and change: The participants reported that the conference had helped them to understand the importance of organizational support in implementing the curriculum. They also reported that the conference had prompted their schools to provide more support in terms of resources, training, and collaboration. d) Increased use of new knowledge and skills: The participants reported that they had been able to apply the knowledge and skills they had learned from the conference in their teaching practice. They specifically mentioned that they had been able to design and implement more effective lesson

plans, assessments, and student-centered activities. e) Improved student learning outcomes: The participants reported that the conference had helped them to improve their students' learning outcomes. They specifically mentioned that their students had shown more engagement, participation, and achievement in the Merdeka Belajar Curriculum.

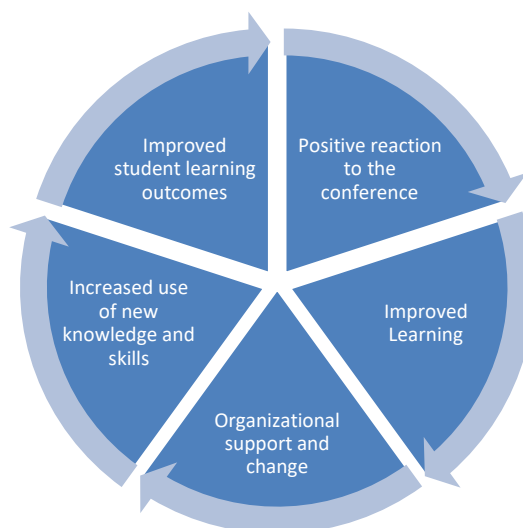


Figure 1. Improving teacher readiness in implementing the Merdeka Belajar Curriculum

The findings of this study suggest that the Darul Hikam Education Conference is an effective strategy for improving teacher readiness in implementing the Merdeka Belajar Curriculum. The positive reaction of the participants to the conference is an indicator of its success in terms of organization, relevance, and usefulness. The conference provided the participants with the knowledge and skills they needed to implement the curriculum effectively, which is essential for achieving the curriculum's goals and objectives.

The participants reported that the conference had improved their understanding of the curriculum's teaching strategies and assessment methods. This is important because effective implementation of the Merdeka Belajar Curriculum requires a deep understanding of these strategies and methods. The conference provided the participants with practical examples and case studies that helped them to apply these strategies and methods in their teaching practice.

Moreover, the participants reported that the conference had prompted their schools to provide more support in terms of resources, training, and collaboration. This is crucial for effective implementation of the curriculum because it requires a collaborative effort among teachers, school administrators, and other stakeholders. The conference helped to create a shared understanding of the importance of the Merdeka Belajar Curriculum and the need for collaborative efforts to implement it successfully.

The participants also reported that they had been able to apply the knowledge and skills they had learned from the conference in their teaching practice. This is an important indicator of the effectiveness of the conference because it suggests that the participants were able to transfer their learning from the conference to their teaching practice. The participants specifically mentioned that they had been able to design and implement more effective lesson plans, assessments, and student-centered activities. This is essential for achieving the curriculum's goals and objectives, which include developing students' critical thinking, problem-solving, and creativity skills.

Finally, the participants reported that the conference had helped them to improve their students' learning outcomes. This is a crucial indicator of the effectiveness of the conference because it suggests that the conference had a positive impact on the participants' teaching practice and, consequently, on their students' learning outcomes. The participants specifically mentioned that their students had shown more engagement, participation, and achievement in the Merdeka Belajar Curriculum. This is an important outcome of the curriculum because it aims to develop students' independence, responsibility, and love for learning.

The Darul Hikam Education Conference is an effective strategy for improving teacher readiness in implementing the Merdeka Belajar Curriculum. The conference not only improved the participants' knowledge and skills but also prompted organizational support and change and led to improved student learning outcomes. The findings of this study have important implications for policymakers, school administrators, and teachers who are responsible for implementing the curriculum. They suggest that providing opportunities for professional development and collaboration can lead to successful implementation of the curriculum and improved student learning outcomes.

Participant A reported that the conference was very useful in improving her readiness to implement the Merdeka Belajar Curriculum. She specifically mentioned that the conference had improved her understanding of the curriculum's teaching strategies and assessment methods. She stated, "I learned a lot about student-centered teaching and assessment, which I think is essential for implementing the curriculum effectively."

Participant A also reported that the conference had prompted her school to provide more support in terms of resources, training, and collaboration. She stated, "After the conference, our school started to provide more resources for implementing the curriculum, such as textbooks and teaching aids. We also started to collaborate more with other teachers to share our experiences and learn from each other."

Participant A reported that she had been able to apply the knowledge and skills she had learned from the conference in her teaching practice. She stated, "I was able to design more effective lesson plans and assessments that are aligned with the curriculum's goals and objectives. I also noticed that my students were

more engaged and motivated to learn, which resulted in better learning outcomes." Participant D: "I have been teaching for 7 years and I am currently teaching in a junior high school in Yogyakarta. I am responsible for teaching social studies for 8th and 9th graders." Participant B: "Overall, I think the conference was very effective in providing me with new insights and knowledge about the 'merdeka belajar' curriculum. The speakers were knowledgeable, and the materials were relevant to my teaching practice."

Participant A: "I found the conference to be very useful in enhancing my understanding of the 'merdeka belajar' curriculum. I particularly enjoyed the interactive sessions where I had the opportunity to discuss ideas and strategies with my fellow teachers." Participant C: "After attending the conference, I implemented some of the strategies that I learned in my classroom. I noticed that my students were more engaged and enthusiastic about the lessons." Participant E: "I reviewed the materials that I received from the conference and found them to be very helpful. I used the handouts and worksheets to design lesson plans that were more aligned with the 'merdeka belajar' curriculum."

The findings of this study suggest that the Darul Hikam Education Conference was an effective supplement to prepare teachers in implementing the Merdeka Belajar curriculum. The conference provided teachers with relevant knowledge, skills, and resources to design effective learning experiences that are aligned with the curriculum's goals and objectives. Furthermore, the conference positively impacted teachers' attitudes and perceptions towards the curriculum and their teaching practice.

These findings have important implications for education practitioners and policymakers. Firstly, it is recommended that similar conferences or professional development programs should be organized regularly to support teachers in implementing the Merdeka Belajar curriculum effectively. Secondly, policymakers should consider providing more resources and opportunities for teacher professional development to ensure the successful implementation of the new curriculum.

However, this study has some limitations that should be acknowledged. Firstly, the sample size was small and limited to one school, which may limit the generalizability of the findings. Secondly, the study relied on self-report data, which may be subject to bias. Future research should consider using larger samples and multiple methods to triangulate the data.

In the nutshell, the Darul Hikam Education Conference was found to be an effective supplement in preparing teachers for the implementation of the Merdeka Belajar curriculum. The conference provided teachers with the necessary knowledge, skills, and resources to design effective learning experiences that are aligned with the curriculum's goals and objectives. The findings of this study have important implications for education practitioners and policymakers in ensuring the successful implementation of the new curriculum.

CONCLUSION

The study concludes that the Darul Hikam Education Conference effectively enhances teachers' readiness for implementing the Merdeka Belajar curriculum, as evidenced by positive participant evaluations and improved teaching skills observed. Teachers perceive the conference positively, citing numerous benefits and competency development. Documentation data analysis supports the conclusion that the conference is a valuable supplement to improve education quality in Indonesia. However, limitations include a small participant pool and single-school focus, suggesting a need for broader research across diverse schools and educational levels. Implications of the study include contributions to Merdeka Belajar curriculum development and teacher training in Indonesia, serving as a reference for education development. The Darul Hikam Education Conference emerges as a practical solution, offering substantial benefits for curriculum implementation and serving as a potential model for future programs

REFERENCES

- Abacioglu, C. S., Volman, M., & Fischer, A. H. (2020). Teachers' Multicultural Attitudes and Perspective Taking Abilities as Factors in Culturally Responsive Teaching. *British journal of educational psychology*, 90(3), 736–752. <https://doi.org/10.1111/bjep.12328>
- Ackah-Jnr, F. R. (2020). The Teacher Should Be Learning: In-Service Professional Development and Learning of Teachers Implementing Inclusive Education in Early Childhood Education Settings. *International Journal of Whole Schooling*, 16(2), 93–121.
- Al Qorin, A. S. (2022). Students' Perceptions of Implementing Independent Learning-Independent Campus Curriculum: Benefits and Challenges. *International Society for Technology, Education, and Science*.
- Ali, W. (2020). Online And Remote Learning in Higher Education Institutes: A Necessity in Light of Covid-19 Pandemic. *Higher education studies*, 10(3), 16–25. <https://doi.org/10.5539/hes.v10n3p16>
- Almanthari, A., Maulina, S., & Bruce, S. (2020). Secondary School Mathematics Teachers' Views on E-Learning Implementation Barriers during the COVID-19 Pandemic: The Case of Indonesia. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(7). <https://doi.org/10.29333/ejmste/8240>
- Beardsley, M., Albó, L., Aragón, P., & Hernández-Leo, D. (2021). Emergency Education Effects on Teacher Abilities and Motivation to Use Digital Technologies. *British Journal of Educational Technology*, 52(4), 1455–1477. <https://doi.org/10.1111/bjet.13101>

- Campbell, A., Wick, D., & Yunuba Hammack, A. (2021). "I Felt Like I Was Not Just a Student:" examining graduate student learning at academic and professional conferences. *Studies in Graduate and Postdoctoral Education*, 12(3), 321–337. <https://doi.org/10.1108/SGPE-08-2020-0061>
- Chiu, T. K. F., Meng, H., Chai, C.-S., King, I., Wong, S., & Yam, Y. (2021). Creation and Evaluation of a Pretertiary Artificial Intelligence (AI) Curriculum. *IEEE Transactions on Education*, 65(1), 30–39. <https://doi.org/10.1109/TE.2021.3085878>
- Dolfing, R., Prins, G. T., Bulte, A. M. W., Pilot, A., & Vermunt, J. D. (2021). Strategies to Support Teachers' Professional Development Regarding Sense-Making in Context-Based Science Curricula. *Science Education*, 105(1), 127–165. <https://doi.org/10.1002/sce.21603>
- Doyle, J., Sonnert, G., & Sadler, P. (2020). How Professional Development Program Features Impact the Knowledge of Science Teachers. *Professional Development in Education*, 46(2), 195–210. <https://doi.org/10.1080/19415257.2018.1561493>
- Du, X., & Chaaban, Y. (2020). Teachers' Readiness for a Statewide Change to PjBl in Primary Education in Qatar. *Interdisciplinary Journal of Problem-Based Learning*, 14(1), n1. <https://doi.org/10.14434/ijpbl.v14i1.28591>
- Elshami, W., Taha, M. H., Abuzaid, & Abdalla, M. E. (2021). Satisfaction With Online Learning in the New Normal: perspective of students and faculty at medical and health sciences colleges. *Medical Education Online*, 26(1), 1920090. <https://doi.org/10.1080/10872981.2021.1920090>
- Foo, B., Wiese, M., Curryer, B., Stancliffe, R. J., Wilson, N. J., & Clayton, J. M. (2021). Specialist Palliative Care Staff's Varying Experiences of Talking With People With Intellectual Disability about Their Dying and Death: A Thematic Analysis of In-Depth Interviews. *Palliative Medicine*, 35(4), 738–749. <https://doi.org/10.1177/0269216321998207>
- Ginja, T. G., & Chen, X. (2020). Teacher Educators' Perspectives and Experiences towards Differentiated Instruction. *International Journal of Instruction*, 13(4), 781–798. <https://doi.org/10.29333/iji.2020.13448a>
- Julia, J., Subarjah, H., Maulana, M., Sujana, & Rachmatin, D. (2020). Readiness and Competence of New Teachers for Career as Professional Teachers in Primary Schools. *European Journal of Educational Research*, 9(2), 655–673. <https://doi.org/10.12973/eu-jer.9.2.655>
- Junarti, J., Sholihah, H. I., Sari, R. P., Oci, M., & Sumanik, E. D. (2023). Innovation in Educational Technology to Enhance Student Learning Achievement in the Era of the Merdeka Curriculum. *Indonesian Journal of Education (INJOE)*, 3(2), 292–309.

- Klapproth, F., Federkeil, L., Heinschke, F., & Jungmann, T. (2020). Teachers' Experiences of Stress and Their Coping Strategies During Covid-19 Induced Distance Teaching. *Journal of Pedagogical Research*, 4(4), 444–452. <https://doi.org/10.33902/JPR.2020062805>
- Lapitan Jr, L. D. S., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An Effective Blended Online Teaching and Learning Strategy During the Covid-19 Pandemic. *Education for Chemical Engineers*, 35, 116–131. <https://doi.org/10.1016/j.ece.2021.01.012>
- Liu, S., & Phelps, G. (2020). Does Teacher Learning Last? Understanding How Much Teachers Retain Their Knowledge After Professional Development. *Journal of Teacher Education*, 71(5), 537–550. <https://doi.org/10.1177/0022487119886290>
- Martinez, C. (2022). Developing 21st Century Teaching Skills: a Case Study of Teaching and Learning Through Project-Based Curriculum. *Cogent Education*, 9(1), 2024936. <https://doi.org/10.1080/2331186X.2021.2024936>
- Miller, E. C., Severance, S., & Krajcik, J. (2021). Motivating Teaching, Sustaining Change in Practice: Design Principles for Teacher Learning in Project-Based Learning Contexts. *Journal of Science Teacher Education*, 32(7), 757–779. <https://doi.org/10.1080/1046560X.2020.1864099>
- Moser, K. M., Wei, T., & Brenner, D. (2021). Remote Teaching During Covid-19: Implications from a National Survey of Language Educators. *System*, 97, 102431. <https://doi.org/10.3102/1684906>
- Naylor, D., & Nyanjom, J. (2021). Educators' Emotions Involved in the Transition to Online Teaching in Higher Education. *Higher Education Research & Development*, 40(6), 1236–1250. <https://doi.org/10.1080/07294360.2020.1811645>
- Oo, C. Z., Alonzo, D., & Davison, C. (2023). Using a Needs-Based Professional Development Program to Enhance Pre-Service Teacher Assessment for Learning Literacy. *International Journal of Instruction*, 16(1), 781–800. <https://doi.org/10.29333/iji.2023.16144a>
- Opoku, D.-G. J., Agyekum, K., & Ayarkwa, J. (2022). Drivers of Environmental Sustainability of Construction Projects: a Thematic Analysis of Verbatim Comments from Built Environment Consultants. *International Journal of Construction Management*, 22(6), 1033–1041. <https://doi.org/10.1080/15623599.2019.1678865>
- Rajasinghe, D., Aluthgama-Baduge, C., & Mulholland, G. (2021). Researching Entrepreneurship: An Approach to Develop Subjective Understanding. *International Journal of Entrepreneurial Behavior & Research*, 27(4), 866–883. <https://doi.org/10.1108/IJEBR-10-2019-0601>
- Romijn, B. R., Slot, P. L., & Leseman, P. P. M. (2021). Increasing Teachers' Intercultural Competences in Teacher Preparation Programs and Through Professional Development: A Review. *Teaching and Teacher Education*, 98, 103236. <https://doi.org/10.1016/j.tate.2020.103236>

- Tantawy, N. (2020). Investigating Teachers' Perceptions of the Influence of Professional Development on Teachers' Performance and Career Progression. *Arab World English Journal (AWEJ)*, 11. <https://doi.org/10.24093/awej/vol11no1.15>
- Thompson Burdine, J., Thorne, S., & Sandhu, G. (2021). Interpretive Description: a Flexible Qualitative Methodology for Medical Education Research. *Medical Education*, 55(3), 336–343. <https://doi.org/10.1111/medu.14380>
- van Driel, J. (2021). Developing Science Teachers' Pedagogical Content Knowledge. In *Science Teachers' Knowledge Development* (pp. 1–37). Brill. https://doi.org/10.1163/9789004505452_001
- Wardani, H. K., Sujarwo, S., Rakhmawati, Y., & Cahyandaru, P. (2023). Analysis of the Impact of the Merdeka Curriculum Policy on Stakeholders at Primary School. *Jurnal Ilmiah Peuradeun*, 11(2), 513–530. <https://doi.org/10.26811/peuradeun.v11i2.801>
- Widayat, S. A., Masunah, J., & Kasmahidayat, Y. (2023). The Implementation of Merdeka Learning Flow in Traditional-Based Dance to Increase Junior High School Students' Creativity. *Fifth International Conference on Arts and Design Education (ICADE 2022)*, 81–93. Atlantis Press. https://doi.org/10.2991/978-2-38476-100-5_13
- Winder, C. L., Witting, M., Tugizimana, F., Dunn, W. B., Reinke, S. N., & Committee, M. S. E. and T. (2022). Providing Metabolomics Education and Training: Pedagogy and Considerations. *Metabolomics*, 18(12), 106. <https://doi.org/10.1007/s11306-022-01957-w>
- Yusuf, F. (2021). The Independent Campus Program for Higher Education in Indonesia: The Role of Government Support and the Readiness of Institutions, Lecturers, and Students. *Journal of Social Studies Education Research*, 12(2), 280–304