



Al-Tanzim: Jurnal Manajemen Pendidikan Islam Vol. 09 No. 02 (2025) : 458-470 Available online at https://ejournal.unuja.ac.id/index.php/al-tanzim/index

Exploring the Impact of Personalized Principal Supervision on Teacher Development: A Novel Approach to Educational Leadership

Gugun Gunadi^{1*}, Zahra Khusnul Lathifah²

¹Elementary School Education Department, Universitas Juanda, Bogor, West Java, Indonesia ²Islamic Educational Management Department, Universitas Juanda, Bogor, West Java, Indonesia Email: gunadi@unida,ac.id¹, zahrakl@gmail.com²

DOI: http://doi.org/10.33650/al-tanzim.v9i2.10853		
Received: 28 February 2025	Revised: 16 April 2025	Accepted: 05 May 2025

Abstract:

This study examines the significance of personalized principal supervision in enhancing teacher performance in schools. This study aims to analyze how the personalized principal supervision model can improve teacher performance in schools. The research method employed is qualitative, utilizing a case study design. Data collection techniques involve interviews, observations, and documentation. Data analysis is carried out through data condensation, data display, and data verification. The results of the study indicate that an open relationship between the principal and teachers, along with providing clear and specific feedback, can enhance teacher competence. Training tailored to individual needs and a collaborative approach create a climate that supports professional development. The implications of this study suggest that personalized principal supervision can enhance teacher performance and foster their competency development. This study suggests that the implementation of personalized principal supervision can be an effective model for improving teacher performance. With a more adaptive and individualized approach, principals can strengthen teacher professional development, foster a more productive climate, and enhance the quality of learning in schools.

Keywords: Principal Supervision, Teacher Performance, Personalized Supervision, Adaptive Approach

Abstrak:

Penelitian ini didasarkan pada pentingnya supervisi kepala sekolah yang dipersonalisasi dalam meningkatkan kinerja guru di sekolah. Penelitian ini bertujuan untuk menganalisis bagaimana model supervisi kepala sekolah yang dipersonalisasi dapat meningkatkan kinerja guru di sekolah. Metode penelitian yang digunakan adalah kualitatif dengan desain studi kasus. Teknik pengumpulan data melibatkan wawancara, observasi, dan dokumentasi. Analisis data dilakukan melalui kondensasi data, display data, dan verifikasi data. Hasil penelitian menunjukkan bahwa hubungan yang terbuka antara kepala sekolah dan guru, serta pemberian umpan balik yang jelas dan spesifik, dapat meningkatkan kompetensi guru. Pelatihan yang disesuaikan dengan kebutuhan individu dan pendekatan kolaboratif menciptakan iklim yang mendukung pengembangan profesional. Implikasi penelitian ini menunjukkan bahwa supervisi kepala sekolah yang dipersonalisasi dapat meningkatkan kinerja guru dan memperkuat pengembangan kompetensi mereka. Penelitian ini memberikan implikasi bahwa penerapan supervisi kepala sekolah yang dipersonalisasi dapat menjadi model yang efektif dalam meningkatkan kinerja guru. Dengan pendekatan yang lebih adaptif dan berbasis kebutuhan individu, kepala sekolah dapat memperkuat pengembangan

profesional guru, menciptakan iklim yang lebih produktif, dan meningkatkan kualitas pembelajaran di sekolah.

Kata Kunci: Supervisi Kepala Sekolah, Kinerja Guru, Supervisi Dipersonalisasi, Pendekatan Adaptif

Please cite this article in APA style as:

Gunadi, G., Lathifah, Z. K. (2025). Exploring the Impact of Personalized Principal Supervision on Teacher Development: A Novel Approach to Educational Leadership. *Al-Tanzim: Jurnal Manajemen Pendidikan Islam*, 9(2), 458-470.

INTRODUCTION

The quality of teaching in schools is greatly influenced by the quality of supervision provided by the principal (Amani et al., 2022; Bellibaş et al., 2022; Juma et al., 2023). However, most existing supervision approaches remain generic and do not adequately consider the individual needs of each teacher (Bengtsen & McAlpine, 2022; Kreber & Wealer, 2023; Sun & Trent, 2022). Educational leadership theories often lead to a formal, top-down approach, where the principal provides the same direction to all teachers without considering the unique characteristics and challenges each teacher faces. Although many managerial theories suggest a more personalized approach to leadership, in reality, many principals struggle to implement it. Research indicates that a personalized supervision approach can enhance teachers' work effectiveness and satisfaction in fulfilling their duties (Sayed et al., 2023; Ubogu, 2024; Manoharan et al., 2024). This gap creates an opportunity to explore how personalized supervision can impact teacher professional development, particularly in vocational schools that face challenges in enhancing their educator competencies.

Research related to principal supervision has focused a lot on the effectiveness of supervision in general and its influence on teacher performance. For example, research by Meyer et al. (2022) and Veletić et al. (2023) examined the relationship between principal leadership style and teaching quality at the high school level. They found that principals with a more supportive and collaborative leadership style can increase teacher engagement in the learning process. On the other hand, a study by Cevikbas and Kaiser (2022) and Maier and Klotz (2022) revealed the importance of providing personalized feedback to improve the quality of teaching in secondary schools. Although these studies provide important insights, none have specifically examined how personalized supervision tailored to each teacher can impact their professional development. This study aims to fill this gap by examining the implementation of more personalized supervision in vocational high schools, a topic that is still rarely discussed in the Indonesian education literature.

This study presents a novel approach, proposing a personalized principal supervision model tailored to each teacher. This approach emphasizes adjusting supervision based on the individual needs of teachers, which differs from conventional supervision approaches that tend to be uniform for all teachers. By considering the context and challenges faced by each teacher, personalized supervision is expected to be more effective in identifying areas of teacher development and providing appropriate support. The novelty of this study lies in the new understanding it offers about how principal supervision can be a more flexible and relevant factor in improving the quality of education at the vocational high school level.

This study aims to identify how the personalized principal supervision model improves teacher performance at SMK Amaliah 1, Bogor. The contribution of this research is expected to provide new insights for education policy, particularly in the development of a supervision model that is more adaptive and relevant to the individual needs of teachers, as well as encouraging principals to be more creative in fulfilling their leadership roles. The basic argument underlying this research is that personalized supervision can enhance the quality of teaching by addressing the specific needs of each teacher, both in terms of mastering the material and in terms of effective classroom management. Through this approach, principals can provide more constructive and relevant feedback, which can increase teacher confidence and encourage them to continue to develop. With more targeted and individual needs-based supervision, teachers will feel more supported and motivated to improve their performance. This study tests the argument by examining how a personalized supervision model affects the effectiveness of teaching and teacher professional development in schools.

RESEARCH METHOD

This study employs a qualitative research design with a case study approach, chosen to investigate the impact of personalized principal supervision on teacher development at SMK Amaliah 1, Bogor. The case study approach enables in-depth research in a specific context, specifically examining how the principal's supervision policy at this school impacts teacher competence and performance. This study aims to explore the experiences and perceptions of teachers and principals regarding the implementation of supervision that is tailored to the individual needs of teachers. The research location was chosen at SMK Amaliah 1, Bogor, West Java, because this school implements various leadership policies that focus on developing teaching quality, including a personalized supervision approach. In addition, this school has good access to conduct interviews and direct observations of the principal and teachers. The selection of this location was also based on the school's willingness to participate in and support this research. Data collection techniques involve in-depth interviews, participant observation, and documentation (Fulton, 2022; Xue & van Kooten, 2023). Interviews will be conducted with the principal and several teachers to explore their views on personalized supervision. Participatory observation will be conducted to observe the interaction between the principal and teachers in the supervision process. Additionally, documentation such as supervision report results and related policies will also be analyzed to provide a more comprehensive picture.

The collected data will be analyzed through several stages, starting with data condensation, which serves to filter and focus information relevant to the research objectives, retaining only data that supports the analysis. Furthermore, data display will be used to organize the condensed data in a more structured and easy-to-understand format, such as a diagram or matrix, which facilitates the interpretation of the findings. This process enables researchers to identify patterns that emerge from the data and compare the relationships between themes that are found. Data verification will be carried out by triangulation, member checking, and audit trail to ensure the validity and credibility of the findings.

RESULT AND DISCUSSION

Result

Deep Relationship Development

The development of a deep relationship between the principal and teachers in the context of personalized supervision at SMK Amaliah 1 refers to the principal's efforts to build open and trusting communication with each teacher. This aims to understand the needs, challenges, and potential of each teacher, enabling supervision to be carried out with a more specific and relevant approach. The principal not only provides direction or evaluation but also functions as a companion who is ready to support the professional development of teachers. In this context, a deep relationship encompasses both emotional and professional aspects, fostering openness between the principal and teachers in sharing experiences, challenges, and solutions related to the teaching process. The principal emphasized the importance of building close relationships with each teacher to understand the context and challenges they face in teaching. "I always try to listen to teachers, what they need, and what they feel in teaching. Each teacher has their uniqueness and problems. That way, I can provide supervision that suits their needs," said the principal. This statement shows that the principal applies the principles of open communication and empathy in the supervision process. The principal not only focuses on evaluating teacher performance but also explores the feelings and challenges experienced by teachers, which allows supervision to be carried out more personally and effectively.

One of the teachers also shared his views on developing this relationship: "The principal often invites us to discuss how to teach. Even if there are problems in class, he is ready to provide suggestions and solutions. I feel appreciated and more comfortable talking about the difficulties I face," said the teacher. These data show that the development of deep relationships occurs not only in the form of formal meetings but also through daily interactions that are collaborative and empathetic. Teachers feel that the principal is not only a superior but a partner in their professional development.

During observations, researchers noted that the principal was actively involved in informal conversations with teachers, both before and after class. On one occasion, the principal was observed discussing the challenges of teaching a particular topic with a teacher. In the conversation, the principal provided constructive feedback and discussed concrete solutions to overcome the problems faced by the teacher. This indicates that the principal is not only limited to formal interactions within the context of supervision but also strives to create space for informal conversations that enable teachers to feel heard and valued. This indicates that developing deep relationships involves more personal and ongoing interactions, both in professional and emotional contexts.

Overall, the data obtained shows that the principal prioritizes developing deep relationships with teachers as an important part of personalized supervision. Through open communication, empathy, and attention to individual teacher needs, the principal creates an environment where teachers feel supported and empowered. This approach enables more effective supervision, as teachers feel that the principal understands their challenges and can provide relevant feedback and valuable solutions. The pattern that emerges from the data shows that the

principal applies the principles of open and empathetic communication, with a focus on developing deep relationships with teachers. This is reflected in the informal conversations that are held regularly, as well as in the principal's efforts to understand the specific needs and challenges faced by each teacher. The relationship that is established is not only a formality in supervision but also includes an emotional aspect that allows teachers to feel more appreciated and motivated to develop. This pattern indicates that a personalized supervision approach can produce a more productive and sustainable relationship between the principal and teachers.

Providing Feedback

Providing feedback in the context of personalized principal supervision at SMK Amaliah 1 refers to the process by which the principal provides constructive and data-based assessments of teacher performance and provides clear directions for improvement. This feedback is tailored to the individual needs of the teacher, whether in terms of teaching methodology, classroom management, or other professional development. The purpose of providing personalized feedback is to encourage teachers to continue to develop by utilizing their strengths and improving existing weaknesses. The principal not only provides a general evaluation but also offers specific, evidence-based suggestions that teachers can directly implement to enhance the quality of learning.

Table 1. Feedback Provision

Indicators	Interview	Informant
Principal involvement in	"After each observation, I always take the time to	Principal
providing feedback	provide direct feedback to the teacher, talking about	
	what went well and what needs to be improved."	
Feedback specifications	"The feedback I receive is very clear. For example, the	Teacher
	principal tells me to improve my interactions with	
	students during the learning process."	
Data-based feedback	"Whenever I provide feedback, I use observational	Principal
	data from the classroom, such as assessment results	
	and observations of classroom interactions."	
Appropriateness of	"The principal provides constructive input. For	Teacher
feedback to teacher needs	example, she knows that I need to focus more on	
	classroom management, and she gives me specific	
	strategies for that."	

Based on the data obtained, the principal showed active involvement in providing feedback to teachers after the teaching process. This feedback was given directly and promptly, allowing teachers to immediately understand areas that needed improvement. This process reflects the principle of personalized supervision, where each piece of feedback is tailored to the specific context and individual needs of the teacher. This approach not only encourages improvements in the quality of teaching but also supports the continuous professional development of teachers.

The feedback provided by the principal was precise and data-driven, enabling teachers to pinpoint areas that needed improvement. Teachers felt that the feedback they received addressed the challenges they faced in the classroom.

This shows the principal's ability to adjust feedback to the needs and conditions of each teacher. This helps teachers focus more on areas that need improvement, while also providing them with clear insights for further development.

The principal not only provided feedback related to pedagogical aspects but also included aspects of classroom management. For example, the principal provided concrete suggestions on how to improve classroom management and interaction with students. This feedback also addressed more practical issues, such as how to create a more interactive atmosphere and manage time more efficiently. All of this feedback is highly relevant to the teaching context faced by each teacher, demonstrating that the principal can provide advice that is tailored to the specific challenges faced by each teacher. Based on the data obtained, the principal focuses on providing evidence-based and targeted feedback. The feedback provided is clear and specific, based on classroom observations, allowing teachers to identify areas for improvement immediately. Additionally, this feedback is tailored to the individual challenges and needs of each teacher, thereby supporting the development of their professional competence. The principal, therefore, functions not only as a supervisor but also as a mentor committed to supporting the individual development of each teacher.

The pattern observed in this data indicates that feedback provision is carried out with a highly focused approach tailored to the specific needs of teachers. Feedback is given directly after class observations and is based on objective data that can be accounted for. This approach demonstrates that supervision is not only evaluative but also collaborative, supporting teachers' personal growth and development. This reflects a good balance between adequate supervision and teacher empowerment in improving the quality of their teaching.

Customized Training and Mentoring

Customized training and mentoring refer to efforts made by the principal and teaching staff to provide targeted, needs-based support to each teacher. This training is designed to enhance the quality of teaching by tailoring training materials to the specific teaching contexts faced by teachers at the school. In addition, mentoring is carried out with a more personalized approach, focusing on teacher professional development through open discussions, timely feedback, and contextual suggestions, so that teachers can overcome challenges in the classroom learning process.

Table 2. Customized Training and Mentoring

Indicators	Interview	Informant
Design Training	"The training provided by the principal is always	Teacher
According to Needs	tailored to our needs in the classroom. There is no	
	uniform training, and everything is personalized."	
Focused Coaching	"We are given more guidance that focuses on the	Teacher
Approach	problems we face directly in the classroom. This is very	
	helpful in improving classroom management."	
Quick and Accurate	"After teaching, the feedback I received was speedy,	Principal
Feedback	timely, and specific to things that needed to be	
	improved."	
Application of	"The techniques taught in the training were directly	Teacher
Techniques Taught	applied in the classroom, and we received further	

guidance if we had difficulties."		
Suitability of Training	"The training I received was very relevant to the Principal	
Materials to Teaching situation in the classroom, especially about how to		
Practices	manage time and the classroom atmosphere."	

Based on the data in Table 2, the customized training and mentoring uphold a powerful principle of personalization. Each teacher receives training tailored to their specific needs, while mentoring is carried out with an approach that focuses on practical challenges faced in the classroom. The feedback provided is very timely, immediately after teaching, allowing teachers to make improvements immediately. This approach reflects close collaboration between the principal and teachers in creating an environment that supports continuous professional development.

Training based on field conditions allows teachers to learn new techniques that can be directly applied in teaching and learning activities. This differs from general training, which tends not to provide space for individual teacher approaches when dealing with more specific problems. Each training session not only involves theory but is also supplemented with practical simulations relevant to the classroom teaching context. Additionally, teachers often engage in group discussions, share experiences, and expand their practical knowledge. The principal is seen actively providing direct feedback, facilitating dialogue between teachers, and supporting them in overcoming existing teaching challenges.

These data show that training and mentoring are very focused on teachers' individual needs. Training is always relevant to the teaching context at hand, whereas coaching focuses on providing quick and specific feedback. This approach enables teachers to immediately apply what they have learned and make improvements in a short period, thereby contributing to enhanced teaching quality.

Thus, the training and mentoring system effectively supports the development of teacher competencies. Training that is not only focused on theory but also on practical applications, as well as mentoring that is tailored to the individual needs of teachers, has a positive impact on more effective classroom management and teaching. This emphasizes the importance of a personalized approach in the professional development process in schools.

Collaboration-based approach

The collaboration-based approach refers to the way the principal and teachers work together in planning, implementing, and evaluating the learning process. This approach emphasizes the importance of collaboration among teachers, principals, and other relevant stakeholders in creating a supportive and innovative learning environment. By utilizing collaboration, the parties involved can share knowledge and experiences, and refine teaching methods and strategies based on constructive feedback. This approach aims to improve the quality of education and classroom management by optimizing the involvement of all stakeholders in the school.

According to one of the teachers, "We often hold regular meetings with the principal and fellow teachers to discuss problems in the classroom and find

solutions together. This not only enriches our understanding but also creates a sense of togetherness in facing challenges." From this statement, it is evident that the collaboration-based approach creates an environment for productive discussions, thereby strengthening the relationship between teachers and the principal. This collaboration helps accelerate problem-solving and enhances the spirit of cooperation among them. A principal added, "This collaboration is not only about sharing ideas but also about supporting and strengthening each other. I believe that when teachers feel supported by their colleagues, they are more enthusiastic in carrying out their teaching duties." This principal's statement emphasizes the aspect of social support in collaboration. The principal not only acts as a leader but also as a facilitator who creates a positive culture of cooperation among teachers.

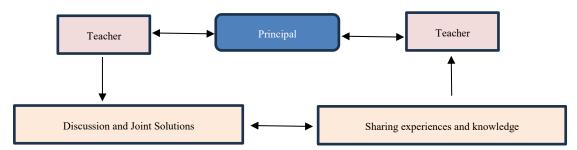


Figure 1. Collaboration Cycle

This flow illustrates the collaboration cycle that occurs between teachers and principals. This collaboration begins with communication between teachers and principals that serves as a bridge to discuss classroom problems and find solutions together. Through this process, knowledge and experiences are shared openly between them. Structured and ongoing joint discussions strengthen professional relationships, support self-development, and improve the quality of teaching.

The researcher noted that there was very active interaction between teachers and principals. Regular meetings are held monthly, serving not only as a forum to discuss teaching constraints but also as a platform to share experiences and strategies that can be applied in the classroom. The researcher also observed that the principal actively encouraged each teacher to contribute to the discussion, ensuring that every voice was heard and valued. This created a collaborative atmosphere that encouraged teachers to be more open and creative in facing teaching challenges.

The collaboration-based approach strongly emphasizes the importance of cooperation between teachers and principals. This collaboration extends beyond discussions about classroom problems to include sharing knowledge and experiences, as well as supporting one another in professional development. Through this collaboration, classroom problems can be addressed promptly, and teachers feel more supported in their work. This approach has proven effective in creating a more effective and productive learning environment.

Collaboration between teachers and principals is dynamic and mutually supportive. Open discussion, sharing of experiences, and social support are key elements in this approach. By working together, teaching problems can be solved more quickly, and the quality of teaching improves through the exchange of knowledge and constructive feedback. This creates a more positive and beneficial working atmosphere for all parties involved.

Discussion

In this study, the development of a deep relationship between the principal and teachers was found to be a key factor in increasing the effectiveness of personalized supervision. This aligns with research conducted, which has shown that the quality of the relationship between the principal and teachers can impact the quality of teaching in the classroom (Burić & Frenzel, 2023; Hanaysha et al., 2023; McLean et al., 2023). Principals who foster open and empathetic communication enable teachers to feel emotionally and professionally supported. The results of this study indicate that the principal not only provides supervision based on performance evaluation but also emphasizes the importance of a trusting relationship, which is highly relevant to the theory of transformational leadership. This theory suggests the importance of attending to individual needs in building a successful team.

The provision of focused and data-driven feedback aligns with the concept of feedback applied in the reflective supervision model, as explained by Ajjawi et al. (2022) and Weallans et al. (2022). The principal provided feedback that was not only general but very specific and based on evidence from direct observations in the classroom. The results of interviews and observations demonstrated that this feedback was constructive for teachers in improving their performance, aligning with the view that clear and focused feedback can encourage the improvement of teacher professional competence. This study demonstrates that the principal applies the principles of data-based supervision, which prioritize relevance and applicability in the teaching context faced by teachers.

Training and guidance tailored to the individual needs of teachers also emerged as a key finding in this study. In line with previous findings, training tailored to the specific needs and context of teachers is more effective than generic training that does not account for individual differences among teachers (Almenara et al., 2022; Popova et al., 2022; Smets et al., 2022). The principal tried to understand the specific challenges faced by each teacher and provided training that was relevant to their needs. This demonstrates the implementation of an approach that is highly focused on developing individual competencies, with implications for enhancing the quality of teaching and overall teacher professionalism.

The collaboration-based approach, which was also found in this study, serves as a reinforcing element in personalized supervision. This approach aligns with the theory of collaboration-based leadership, which emphasizes the importance of reciprocal interactions between principals and teachers in enhancing the quality of education (Hidayat et al., 2024; Pan & Songco, 2023; Teng et al., 2024). The principal not only provides unilateral direction but also creates space for open dialogue with teachers. This collaboration allows teachers to feel more involved in their professional development process and reduces the sense of

distance between them and the principal.

The results of this study confirm that collaboration-based leadership can produce a more positive work climate and support continuous professional growth. The theoretical contribution of these findings suggests that personalized supervision can improve teacher performance holistically and adaptively. Practically, principals can adopt this approach to improve the effectiveness of supervision in other schools. By providing more focused feedback, providing relevant training, and building closer relationships with teachers and principals, an environment can be created that supports more effective professional development. Overall, this study emphasizes the importance of incorporating a more personalized and collaborative approach into the educational supervision system to achieve more optimal results in enhancing the quality of teaching.

CONCLUSION

The most significant finding of this study is that personalized principal supervision has a substantial impact on enhancing teacher performance. Developing a deep relationship between the principal and teachers, providing focused and data-driven feedback, training and mentoring tailored to individual teacher needs, and adopting a collaborative approach have been shown to create an environment that supports teacher professional development more effectively. The wisdom gained from this study underscores the importance of a more humane and adaptive supervision approach, one that focuses not only on evaluative aspects but also on providing emotional and practical support tailored to each teacher.

The main strength of this paper lies in its contribution to the development of educational leadership theory, especially in the context of personalized supervision. This study adds to the understanding of how principals can optimize their roles not only as supervisors but also as mentors and facilitators who focus on individual teacher development. The findings also highlight that a collaborative and open communication approach is essential in creating a climate conducive to improving teaching quality, as well as inspiring changes in supervision practices in other schools. However, this study also has limitations, primarily because its scope is limited to one school and does not encompass wider variations in other school contexts or different educational levels. In addition, this study relies on subjective qualitative data, such as interviews and observations, which may introduce biases and limit the objectivity of the findings.

ACKNOWLEDGMENT

We want to express our deepest gratitude to the Principal and the entire school community for the support, cooperation, and opportunities provided during the conduct of this research. Without the assistance and active participation of the Principal and all parties involved, this research would not have been possible to carry out properly.

REFERENCES

- Ajjawi, R., Olson, R. E., & McNaughton, N. (2022). Emotion as Reflexive Practice: A New Discourse for Feedback Practice and Research. *Medical Education*, 56(5), 480-488. https://doi.org/10.1111/medu.14700
- Amani, J., Myeya, H., & Mhewa, M. (2022). Understanding the Motives for Pursuing Postgraduate Studies and Causes of Late Completion: Supervisors and Supervisees' Experiences. *Sage Open*, 12(3), 21582440221109584. https://doi.org/10.1177/21582440221109586
- Bellibaş, M. Ş., & Kılınç, A. Ç. (2022). Linking Instructional Leadership to Teacher Practices: The Mediating Effect of Shared Practice and Agency in Learning Effectiveness. *Educational Management Administration & Leadership*, 50(5), 812-831. https://doi.org/10.1177/1741143220945706
- Bengtsen, S. S., & McAlpine, L. (2022). A Novel Perspective on Doctoral Supervision: Interaction of Time, Academic Work, Institutional Policies, and Lifecourse. *Learning and Teaching*, 15(1), 21-45. https://doi.org/10.3167/latiss.2022.150103
- Burić, I., & Frenzel, A. C. (2023). Teacher Emotions Are Linked with Teaching Quality: Cross-Sectional and Longitudinal Evidence from Two Field Studies. *Learning and Instruction*, 88, 101822. https://doi.org/10.1016/j.learninstruc.2023.101822
- Cabero-Almenara, J., Guillén-Gámez, F. D., Ruiz-Palmero, J., & Palacios-Rodríguez, A. (2022). Teachers' Digital Competence to Assist Students with Functional Diversity: Identification of Factors through Logistic Regression Methods. *British Journal of Educational Technology*, 53(1), 41-57. https://doi.org/10.1111/bjet.13151
- Cevikbas, M., & Kaiser, G. (2022). Promoting Personalized Learning in Flipped Classrooms: A Systematic Review Study. *Sustainability*, 14(18), 11393. https://doi.org/10.3390/su141811393
- Fulton, C. (2022). The Hidden, Manipulated, and Secret Information World of Gambling Addiction: Maximizing Use of In-Depth, Narrative Interviews to Understand Social Impact. *Library & Information Science Research*, 44(4), 101193. https://doi.org/10.1016/j.lisr.2022.101193
- Hanaysha, J. R., Shriedeh, F. B., & In'airat, M. (2023). Impact of Classroom Environment, Teacher Competency, Information and Communication Technology Resources, and University Facilities on Student Engagement and Academic Performance. *International Journal of Information Management Data Insights*, 3(2), 100188. https://doi.org/10.1016/j.jjimei.2023.100188
- Hidayat, N., Andriani, F., & Yoenanto, N. H. (2024). Exploring Challenges and Strategies for Improving the Quality of Education: Integrative Literature Review. *Indonesian Journal of Educational Research and Review*, 7(1), 128-141. https://doi.org/10.23887/ijerr.v7i1.73824
- Juma, J. J., Ndwiga, Z. N., & Nyaga, M. (2023). Instructional Leadership as a Controlling Function in Secondary Schools in Rangwe Sub County, Kenya: Influence on Students' Learning Outcomes. Educational Management Administration & Leadership, 51(4), 791-808. https://doi.org/10.1177/17411432211015228

- Kreber, C., & Wealer, C. (2023). Intentions, Concepts and Conceptions of Research Supervision: A Consideration of Three Disciplines. *Teaching in Higher Education*, 28(6), 1446-1463. https://doi.org/10.1080/13562517.2021.1900815
- Maier, U., & Klotz, C. (2022). Personalized Feedback in Digital Learning Environments: Classification Framework and Literature Review. *Computers and Education: Artificial Intelligence, 3,* 100080. https://doi.org/10.1016/j.caeai.2022.100080
- Manoharan, G., Mishra, A. B., Adusumilli, S. B. K., Chavva, M., Damancharla, H., & Lenin, D. S. (2024). Supervised Learning for Personalized Marketing Strategies. 2024 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), 1-6. IEEE. https://doi.org/10.1109/ACCAI61061.2024.10602307
- McLean, L., Taylor, M., & Sandilos, L. (2023). The Roles of Adaptability and School Climate in First-Year Teachers' Developing Perceptions of Themselves, Their Classroom Relationships, and the Career. *Journal of School Psychology*, 99, 101213. https://doi.org/10.1016/j.jsp.2023.04.003
- Meyer, A., Richter, D., & Hartung-Beck, V. (2022). The Relationship between Principal Leadership and Teacher Collaboration: Investigating the Mediating Effect of Teachers' Collective Efficacy. *Educational Management Administration* & Leadership, 50(4), 593-612. https://doi.org/10.1177/1741143220945698
- Pan, L., & Songco, E. A. (2023). Exploring Teachers' Perceptions: The Dean's Role in Fostering Creative Collaboration in Chinese Aesthetic Education Reform. *International Journal of Education and Management Studies*, 13(4), 411-417.
- Popova, A., Evans, D. K., Breeding, M. E., & Arancibia, V. (2022). Teacher Professional Development around the World: The Gap between Evidence and Practice. *The World Bank Research Observer*, *37*(1), 107-136. https://doi.org/10.1093/wbro/lkab006
- Sayed, W. S., Noeman, A. M., Abdellatif, A., Abdelrazek, M., Badawy, M. G., Hamed, A., & El-Tantawy, S. (2023). AI-Based Adaptive Personalized Content Presentation and Exercises Navigation for an Effective and Engaging E-Learning Platform. *Multimedia Tools and Applications*, 82(3), 3303-3333. https://doi.org/10.1007/s11042-022-13076-8
- Smets, W., De Neve, D., & Struyven, K. (2022). Responding to Students' Learning Needs: How Secondary Education Teachers Learn to Implement Differentiated Instruction. *Educational Action Research*, 30(2), 243-260. https://doi.org/10.1080/09650792.2020.1848604
- Sun, X., & Trent, J. (2022). Promoting Agentive Feedback Engagement through Dialogically Minded Approaches in Doctoral Writing Supervision. *Innovations in Education and Teaching International*, 59(4), 387-397. https://doi.org/10.1080/14703297.2020.1861965
- Teng, Y., Pu, R., & Hao, Y. (2024). How Can an Innovative Teaching Force Be Developed? The Empowering Role of Distributed Leadership. *Thinking Skills and Creativity*, 51, 101464. https://doi.org/10.1016/j.tsc.2024.101464

- Ubogu, R. (2024). Supervision of Instruction: A Strategy for Strengthening Teacher Quality in Secondary School Education. *International Journal of Leadership in Education*, 27(1), 99-116. https://doi.org/10.1080/13603124.2020.1829711
- Veletić, J., Price, H. E., & Olsen, R. V. (2023). Teachers' and Principals' Perceptions of School Climate: The Role of Principals' Leadership Style in Organizational Quality. *Educational Assessment, Evaluation and Accountability*, 35(4), 525-555. https://doi.org/10.1007/s11092-023-09413-6
- Weallans, J., Roberts, C., Hamilton, S., & Parker, S. (2022). Guidance for Providing Effective Feedback in Clinical Supervision in Postgraduate Medical Education: A Systematic Review. *Postgraduate Medical Journal*, *98*(1156), 138-149. https://doi.org/10.1136/postgradmedj-2020-139566
- Xue, H., & van Kooten, K. (2023). Inside Out: Addressing the "How" of Data Collection in Experience Design Research Applying Introspective Methods. *Advanced Design Research*, 1(2), 109-125. https://doi.org/10.1016/j.ijadr.2024.02.001