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A Bibliometric Analysis of Instructional Technological Leadership Research Using VOSviewer

R. Siti Pupu Fauziah¹, Irman Suherman², Abdul Kholik³,
Muhammad Rendi Ramdhani⁴, Zahra Khusnul Lathifah⁵

Islamic Educational Management, Universitas Djuanda, Bogor, West Java, Indonesia

E-mail: siti.pupu.fauziah@unida.ac.id¹, irman.suherman@unida.ac.id²,

abdul.kholik@unida.ac.id³, muhammad.rendi.ramdhani@unida.ac.id⁴,

zahra.khusnul.latifah@unida.ac.id⁵

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Abstract:

This study aims to analyze the development of research on technology-related instructional leadership. The research method used is bibliometric analysis. The articles used in this study were sourced from the Google Scholar database with the help of the Publication of Perish from 2015-2022; 498 papers were found. Data analysis using the VOSviewer application. The results showed that the number of publications decreased yearly, where the most occurred in 2015, namely 102 publications. The results of the density visualization analysis shown in yellow circles indicate the themes most frequently used in recent research, namely instructional technology, technology integration, instructional leadership practice, school leader, transformational leadership, covid, time and student. Meanwhile, based on network visualization, the topic of instructional leadership has a relationship with the term development, effect, effectiveness, instructional leader, instructional leadership, instructional leadership practice, leader, leadership, model, principal, research, school, school leader, school leadership, school principal and transformational leadership. These results illustrate that technology-based instructional leadership can be developed by referring to instructional technology, technology integration, as a term rarely used based on visualization overlay.

Keywords: *Instructional Leadership, Technology, VOSviewer*

Abstrak:

Penelitian ini bertujuan untuk menganalisis perkembangan riset tentang kepemimpinan intruksional yang berhubungan dengan teknologi. Metode penelitian yang digunakan adalah bibliometric analysis. Artikel yang digunakan dalam penelitian ini bersumber dari database google scholar dengan bantuan publish dari perish dari tahun 2015-2022 ditemukan 498 paper. Analisis data menggunakan aplikasi VOSviewer. Hasil penelitian menunjukkan bahwa jumlah publikasi setiap tahunnya mengalami penurunan, dimana publikasi terbanyak terjadi pada tahun 2015 yaitu sebanyak 102 publikasi. Hasil analisis density vizualitation yang ditunjukkan dengan bulatan berwarna kuning menandakan tema yang paling sering digunakan dalam penelitian terbaru, yaitu instructional technology, technology integration, instructional leadership practice, school leader, transformational leadership, covid, time and student. Sedangkan berdasarkan network vizualitation topik instructional leadership memiliki hubungan dengan term development, effect, effectiveness, instructional leader, instructional leadership, instructional leadership practice, leader,

leadership, model, principal, research, school, school leader, school leadership, school principal dan transformational leadership. Hasil ini menggambarkan bahwa topik instructional leadership berbasis teknologi dapat dikembangkan dengan mengarah pada instructional technology, technology intergration sebagai term yang masih jarang dilakukan berdasarkan overlay vizualitation.

Kata Kunci: *Instructional Leadership, Tekhnologi, VOSviewer*

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INTRODUCTION

Instructional leadership is a research that focuses on teacher leadership which is described by the teacher's ability to manage classes and determine the direction of learning (Abonyi, 2021; Gümüş et al., 2021). According to Hallinger and Murphy (1985) in Munna (2021), instructional leadership is a vital concept focusing on curriculum and learning processes. Instructional leaders are the people who bring about the effectiveness of the institution, especially in terms of teaching and learning. Meanwhile, Shaked's research (2021) states that instructional leadership is carried out for two reasons: first, the relationship between the school principal and parents of students (the community) focuses on monitoring and control, and second, the characteristics of parents who want learning and achievement.

Instructional leadership focus on how teachers can lead in class, especially in learning activities (Shaked, 2021; Walker, 2022; Bellibaş, 2021). Instructional leadership is critical to be applied in the world of education because, based on research results, if a school principal/teacher uses instructional leadership, this leadership has a significant influence on student achievement (Logoho, 2016; Ma, 2021; Shaked, 2021). The role of leadership Instructional services in improving teacher professionalism has long been recognized as an essential factor in school organizations, especially regarding their responsibility to improve the quality of learning in schools (Mintardjo, 2015). Research states that students can have a study plan for their future education influenced by instructional leadership (Lambrecht et al., 2022). Other research results found that students who were taught by teachers who had leadership had succeeded academically. Non-academic compared to students taught by teachers who lacked leadership in and outside the classroom (Warren, 2021).

The development of science and technology impacts the use of technology in every form of learning activity. In addition, if you look at technological developments in the era of the industrial revolution 4.0, namely manufacturing technology, it has entered the automation and data exchange trend, which is its trademark. This includes cyber-physical systems, the internet of things (IoT), cloud computing, and cognitive computing. In addition, these activities impact teachers' perspectives in organizing, managing and implementing learning activities inside and outside the classroom. Mainly if we refer to one of the themes of long-term educational development, referring to Law Number 17 of 2007 concerning the 2005-2025 National Long-Term

Development Plan (RPJPN). In the fourth period, the 2020-2024 RPJMN has the main focus, namely realizing Indonesian people who are independent, advanced, just and prosperous through accelerating development in all fields with a solid economic structure based on competitive advantage, with the theme of educational development, namely international competitiveness.

There have been many studies that examine Instructional leadership, such as Webster's research (2017), with research results that as leaders deal with their perceived experience of the inevitability of technological change and their concern for preparing students for a technological future, the core category Keep up with technology (or being left behind) is given the greater weight in technology decision making. Daffin (2022) states that the factors that most influence the use of learning technology in integrating technology in classroom practice are high teacher self-efficacy resulting from support from school leadership, access to resources, and a clear intention to achieve learning success for students. Research by Bellibaş et al. (2020); Boyce and Bowers (2018); Gümüş et al. (2021); Liu and Hallinger (2018) state that the idea of the principal's instructional leadership plays a vital role in the success of the school.

The teacher's leadership style in teaching is the main thing that needs to be done. So the study of instructional leadership becomes essential in adapting to rapid technological developments. It cannot be denied that technology in education is essential. One of the spearheads that can address this is how a school principal develops leadership skills that lead to technological literacy.

This study aims to analyze research trends on technology-based instructional leadership. Study of international journal publication data through the Google Scholar database in 2015-2022. Data analysis used bibliometric analysis with the help of VOSviewer. The results of the research are expected to describe trends in the development of research on technology-based instructional leadership and look for relationships with other terms so that terms are found that are rarely used as research topics on instructional leadership related to technology.

RESEARCH METHODS

The research method used in this research is bibliometric analysis. Operationally this research was carried out through three stages, namely, 1) data collection, 2) data selection and 3) data analysis using the help of VOSviewer, as Figure 1.

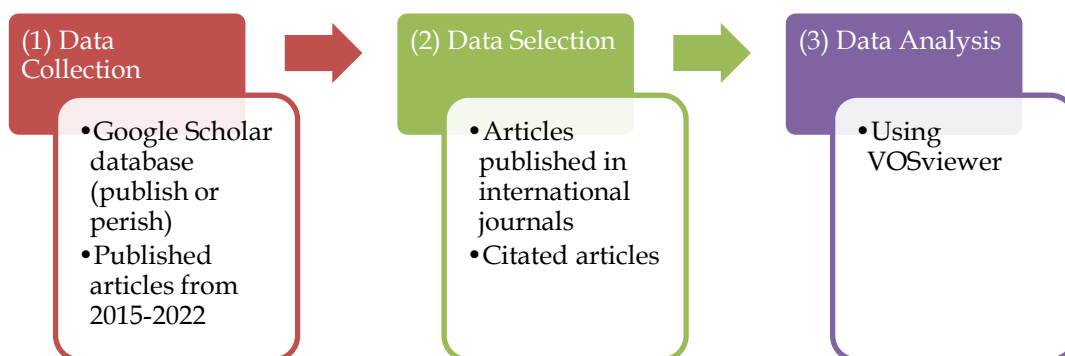


Figure 1. Research Stages

Cluster 1. Shown in red. The term most often used is Instructional leadership. This term has 42 relationships with other terms, a relationship strength of 380 and occurrences of 114. Sixteen items appear in cluster 1: development, effect, effectiveness, instructional leader, instructional leadership, instructional leadership practice, leader, leadership, model, principal, research, school, school leader, school leadership, school principal and transformational leadership.

Cluster 2. is shown in green. The term most often used is instruction. This term has 44 relationships with other terms, has a relationship strength of 609 and an accuracy of 167. Twelve items appear in cluster 2: approach, challenge, classroom, covid, curriculum, educator, implementation, instruction, science instruction, science teacher, teaching, and time.

Cluster 3. is shown in blue. The term most often used is technology. This term has 42 relationships with other terms, a relationship strength of 724 and an accuracy of 186. Seven items appear in cluster 3: analysis, educational technology, instructional technology, integration, professional development, relationship, teacher, technology, and technology integration.

Cluster 4. Shown in yellow. The term most often used is science. This term has 45 relationships with other items, a relationship strength of 706 and an accuracy of 183. Seven items appear in cluster 4: education, engineering, instructional practice, mathematics, science, STEM, student, and student.

Cluster 5. ditunjukkan dengan warna ungu. Item yang paling sering digunakan adalah learning. Item ini memiliki 39 hubungan dengan item lain, memiliki kekuatan hubungan sebesar 209 dan accurances 55. Ada 2 item yang muncul pada cluster 5, yaitu experience dan learning.

Overlay Vizualitation

Overlay Visualization is an analysis that aims to analyze the content, patterns, and trends of a document set by measuring the power of terms and counting the number of keywords that appear simultaneously in the article under study. In this analysis, we find out which terms are current research topics, shown in yellow. Based on Figure 3, the terms appearing in the yellow pattern are instructional technology, technology integration, instructional leadership practices, school leaders, transformational leadership, covid, time and students.

The development trend of research on technology-based instructional leadership from 2015-2022 has decreased yearly. The highest number of publications occurred in 2017, namely 102 publications, then after that, it continued to decline until 2022 there were only 13 publications. This may be because the topic of instructional leadership has started to get saturated, so it is necessary to find out which themes are rarely used about instructional leadership (see figure 4).

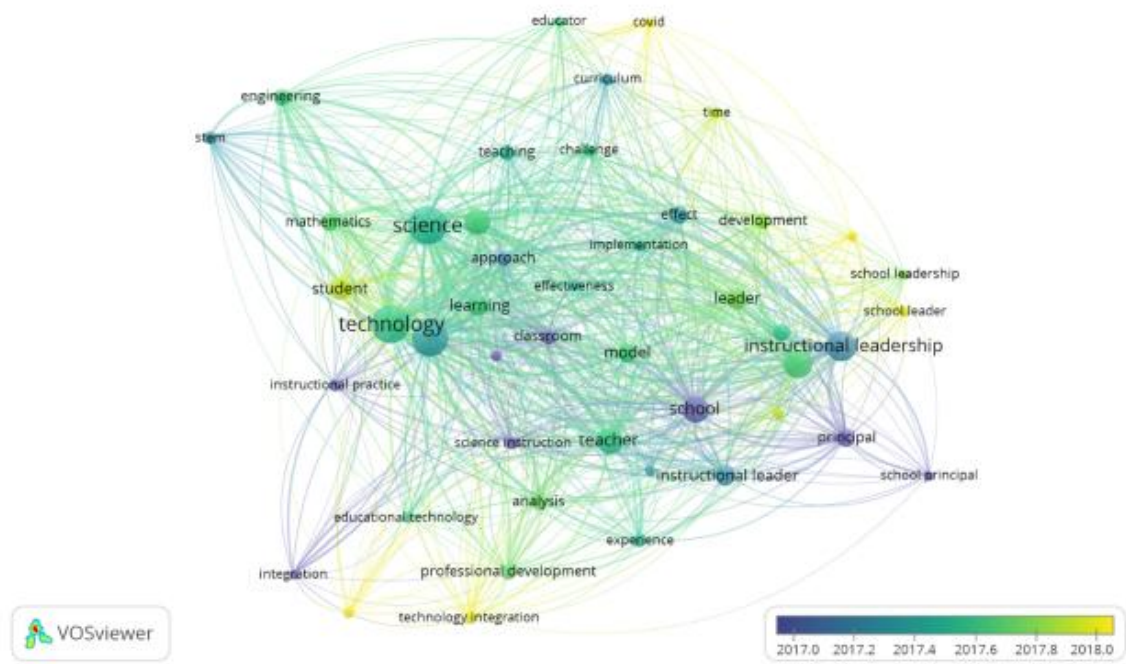


Figure 3. Overlay Vizualitation

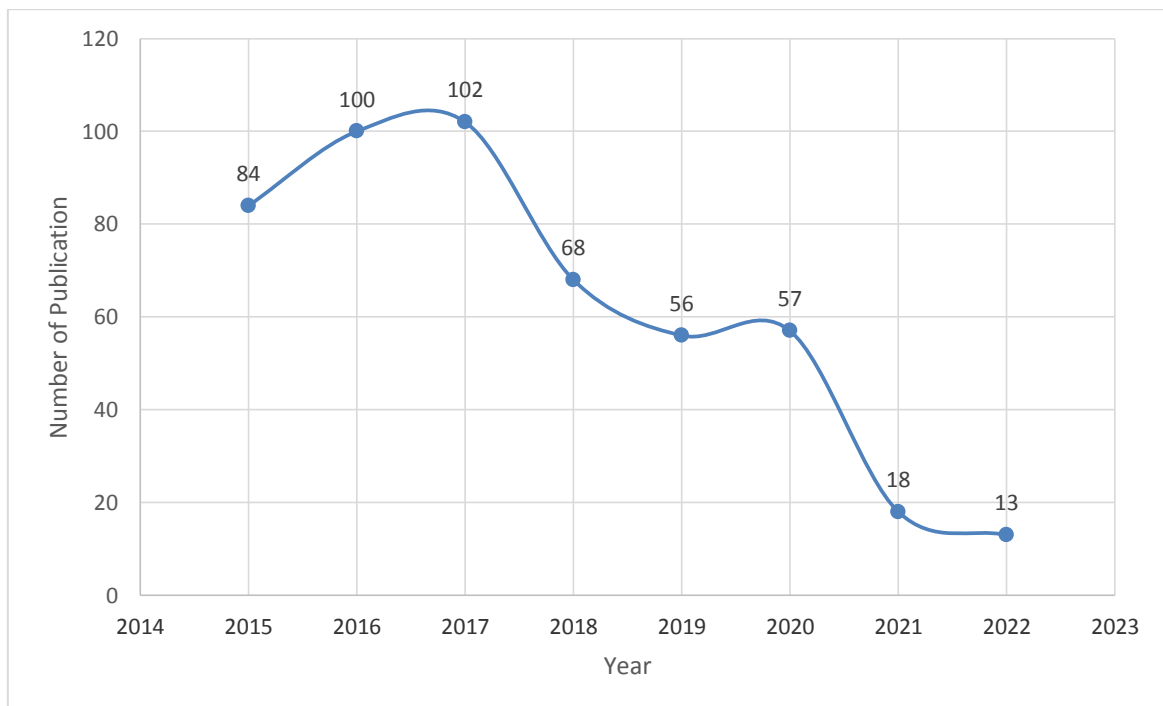


Figure 4. Development of Number of Publications

Density Vizualitation

Density visualisation explains the density of the keywords Instructional Leadership, Science and Technology. Several colours appear in the picture. Namely, the yellow indicates that the research topic is most often carried out in science, technology and instructional leadership. At the same time, the yellow colour, which is getting dimmer, illustrates that this topic is rarely used as a

605	TR Kelley, JG Knowles	A conceptual framework for integrated STEM education	2016	International Journal of STEM education
507	K McKnight, K O'Malley, R Ruzic...	15 Teaching in a digital age: How educators use technology to improve student learning	2016	... on technology in ...
497	DJ Leu, CK Kinzer, J Coiro, J Castek...	11 New literacies: A dual-level theory of the changing nature of literacy, instruction, and assessment	2017	Journal of ...
458	S Andriani, N Kesumawati, M Kristiawan	The influence of the transformational leadership and work motivation on teachers performance	2018	... Journal of Scientific & Technology
433	AA Shahroom, N Hussin	Industrial revolution 4.0 and education	2018	... Business and Social Sciences
423	AA Fernandez, GP Shaw	4 Academic leadership in a time of crisis: The Coronavirus and COVID-19	2020	Journal of leadership Studies

Density visualization analysis illustrates that research on technology topics in implementing classroom learning still needs to be carried out. The yellow, increasingly dimmer, indicates a theme rarely used in recent research, namely instructional technology, technology integration, instructional leadership practice, school leader, transformational leadership, covid, time and student. This also aligns with what is described in the overlay visualization analysis. Namely school leaders and technological integration being the most recently used topics in research related to instructional leadership.

Hwang et al. (2015) state that is using technology causes classroom learning to be carried out more effectively in the Seamless flipped learning model. In addition, Clark's research (2015) states the same thing, where the flipped learning model becomes effective when learning changes by utilizing technology. Even research on the use of technology in learning is a new topic, likewise with the development of technology-based learning models where the teacher determines success.

CONCLUSION

Based on the results and discussion above, from the published data of international journals through the Google Scholar database in 2015-2022, there were 498 papers analyzed using VOSviewer. The development trend of research on technology-based instructional leadership has decreased. There is a saturation of studies on instructional leadership. The themes most often used in recent research are instructional technology, technology integration, instructional leadership practice, school leader, transformational leadership, covid, time and student. The theme recommendations rarely used in this study are based on analysis using VOSviewer by looking at density visualization, namely educational technology, integration, time, and STEM.

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REFERENCES

- Abonyi, U. K., & Sofo, F. (2021). Exploring Instructional Leadership Practices of Leaders in Ghanaian Basic Schools. *International Journal of Leadership in Education*, 24(6), 838-854.
- Andriani, S., Kesumawati, N., & Kristiawan, M. (2018). The Influence of The Transformational Leadership and Work Motivation on Teachers Performance. *International journal of scientific & technology research*, 7(7), 19-29.
- Bellibaş, M. Ş., Kılınç, A. Ç., & Polatcan, M. (2021). The Moderation Role of Transformational Leadership in The Effect of Instructional Leadership on Teacher Professional Learning and Instructional Practice: An Integrated Leadership Perspective. *Educational Administration Quarterly*, 57(5), 776-814. <https://doi.org/10.1177/0013161X211035079>
- Bellibaş, M. Ş., Polatcan, M., & 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>
- Bellour, L. (2021). Publish or perish: Scholarly Publishing Challenges in Africa. *Journal of Studies in Language, Culture, and Society (JSLCS)*, 4(2), 132–142.
- Boyce, J., & Bowers, A. J. (2018). Toward an Evolving Conceptualization of Instructional Leadership as Leadership for Learning: Meta-narrative Review of 109 Quantitative Studies Across 25 Years. *Journal of educational administration*, 56(2). <https://doi.org/10.1108/JEA-06-2016-0064>
- Clark, K. R. (2015). The Effects of The Flipped Model of Instruction on Student Engagement and Performance in The Secondary Mathematics Classroom. *Journal of Educators online*, 12(1), 91-115. <https://doi.org/10.9743/JEO.2015.1.5>
- Daffin, A. N. (2022). A Phenomenological Study of Teachers' Motivations To Use Instructional Technology. Doctoral Dissertations and Projects. 3465. <https://digitalcommons.liberty.edu/doctoral/3465>.
- Fernandez, A. A., & Shaw, G. P. (2020). Academic Leadership in A Time of Crisis: The Coronavirus and COVID-19. *Journal of leadership Studies*, 14(1), 39-45. <https://doi.org/10.1002/jls.21684>
- Goddard, R., Goddard, Y., Sook Kim, E., & Miller, R. (2015). A Theoretical and Empirical Analysis of The Roles of Instructional Leadership, Teacher Collaboration, and Collective Efficacy Beliefs in Support of Student Learning. *American journal of education*, 121(4), 501-530. <https://doi.org/10.1086/681925>

- Gümüş, S., Hallinger, P., Cansoy, R., & Bellibaş, M. Ş. (2021). Instructional Leadership in A Centralized and Competitive Educational System: A Qualitative Meta-Synthesis of Research from Turkey. *Journal of Educational Administration*, 59(6), 702-720. <https://doi.org/10.1108/JEA-04-2021-0073>.
- Gümüş, S., Hallinger, P., Cansoy, R., & Bellibaş, M. Ş. (2021). Instructional Leadership in A Centralized and Competitive Educational System: A Qualitative Meta-Synthesis of Research from Turkey. *Journal of Educational Administration*, 59(6), 702-720. <https://doi.org/10.1108/JEA-04-2021-0073>
- Hwang, GJ., Lai, CL. & Wang, SY. (2015). Seamless Flipped Learning: A Mobile Technology-Enhanced Flipped Classroom with Effective Learning Strategies. *J. Comput. Educ.* 2, 449-473. <https://doi.org/10.1007/s40692-015-0043-0>
- Immawati, S. A. (2022). Gaya Hidup Berbelanja Online: Kajian Pustaka Sistematis. *Simposium Nasional Multidisiplin (SinaMu)*, 3.
- Kelley, T. R., & Knowles, J. G. (2016). A Conceptual Framework for Integrated STEM Education. *International Journal of STEM education*, 3, 1-11. <https://doi.org/10.1186/s40594-016-0046-z>
- Lambrecht, J., Lenkeit, J., Hartmann, A., Ehlert, A., Knigge, M., & Spörer, N. (2022). The Effect of School Leadership on Implementing Inclusive Education: How Transformational and Instructional Leadership Practices Affect Individualised Education Planning. *International Journal of Inclusive Education*, 26(9), 943-957.
- Leu, D. J., Kinzer, C. K., Coiro, J., Castek, J., & Henry, L. A. (2017). New Literacies: A Dual-Level Theory of the Changing Nature of Literacy, Instruction, and Assessment. *Journal of Education*, 197(2), 1-18. <https://doi.org/10.1177/002205741719700202>
- Liu, S., & Hallinger, P. (2018). Principal Instructional Leadership, Teacher Self-Efficacy, and Teacher Professional Learning in China: Testing a Mediated-effects Model. *Educational Administration Quarterly*, 54(4), 501-528. <https://doi.org/10.1177/0013161X18769048>
- Logho, A. F. (2016). Peranan Kepemimpinan Instruksional dalam Pendidikan: Konsep dan Aplikasinya dalam Pendidikan di Indonesia. *Jurnal Penelitian*, 20(1), 69-80.
- Ma, X., & Marion, R. (2021). Exploring How Instructional Leadership Affects Teacher Efficacy: A Multilevel Analysis. *Educational Management Administration & Leadership*, 49(1), 188-207. <https://doi.org/10.1177/1741143219888742>
- McKnight, K., O'Malley, K., Ruzic, R., Horsley, M. K., Franey, J. J., & Bassett, K. (2016). Teaching in a digital age: How Educators Use Technology to Improve Student Learning. *Journal of research on technology in education*, 48(3), 194-211. <https://doi.org/10.1080/15391523.2016.1175856>
- Munna, A. S. (2021). Instructional Leadership and Role of Module Leaders. *International Journal of Educational Reform*, 32(1), 38-54. <https://doi.org/10.1177/10567879211042321>

- Shahroom, A. A., & Hussin, N. (2018). Industrial Revolution 4.0 and Education. *International Journal of Academic Research in Business and Social Sciences*, 8(9), 314–319. <https://doi.org/10.6007/IJARBS/v8-i9/4593>
- Shaked, H. (2021). Instructional Leadership in Higher Education: The Case of Israel. *Higher Education Quarterly*, 75(2), 212-226. <https://doi.org/10.1111/hequ.12274>
- Shaked, H. (2021). Relationship-based Instructional Leadership. *International Journal of Leadership in Education*, 1-18. <https://doi.org/10.1080/13603124.2021.1944673>
- Shaked, H. (2021). Between Center and Periphery: Instructional Leadership in Israeli Rural Schools. *International Journal of Educational Management*, 35(7), 1361-1374. <https://doi.org/10.1108/IJEM-04-2021-0147>
- Tschannen-Moran, M., & Gareis, C. R. (2015). Faculty Trust in The Principal: An Essential Ingredient in High-Performing Schools. *Journal of Educational Administration*, 53(1), 66-92. <https://doi.org/10.1108/JEA-02-2014-0024>
- Walker, A., & Qian, H. (2022). Developing a Model of Instructional Leadership in China. *Compare: A Journal of Comparative and International Education*, 52(1), 147-167. <https://doi.org/10.1080/03057925.2020.1747396>
- Warren, L. L. (2021). The Importance of Teacher Leadership Skills in The Classroom. *Education Journal*, 10(1), 8-15. <https://doi.org/10.11648/j.edu.20211001.12>
- Webster, M. D. (2017). Philosophy of Technology Assumptions in Educational Technology Leadership. *Journal of Educational Technology & Society*, 20(1), 25-36.
- Wiyono, B. B., Kusmintardjo, S., & Imron, A. (2015). Effect of Humanistic Principles-Based Active-Collaborative Supervision on Teachers' Competence. *Journal of Acta Scientia Et Intellectus*, 1(3), 19-26.

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