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EMPOWERING EDUCATORS: THE ROLE OF TEACHER LEADERSHIP AND LEARNING COMMUNITIES IN ENHANCING LEARNING AGILITY

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Abstract

The advancement of the digital era demands that teachers possess a high level of adaptability. However, in rural areas such as Limbangan Subdistrict, Kendal Regency, limitations in infrastructure and access to technology pose significant challenges. This study aims to examine the influence of teacher leadership and participation in learning communities on the learning agility of elementary school teachers. A quantitative approach with explanatory research design was employed, involving 137 teachers selected through proportionate stratified random sampling. Data were collected via an online questionnaire and analyzed using multiple linear regression, t-tests, F-tests, and the coefficient of determination. The results indicate that teacher leadership has a positive and significant effect on learning agility ($p < 0.05$), while participation in learning communities does not show a significant partial effect. However, jointly, both variables have a significant influence on learning agility, contributing 67% to the variance. These findings highlight that strengthening teacher leadership is a key factor in enhancing adaptive learning capacity amid limitations. Meanwhile, participation in learning communities needs to be more strategically directed to have a tangible impact on professional development. This research contributes to the literature on teacher capacity development in rural areas and offers policy directions to support digital-based educational transformation.

Keywords: ***teacher leadership, learning communities, learning agility***

INTRODUCTION

The digital era has fundamentally transformed various aspects of life, including the field of education. The Fourth Industrial Revolution has driven the adoption of smart technologies and digitalization in teaching and learning processes, requiring teachers not only to be skilled in using and mastering technology but also to develop a high level of adaptability to dynamic changes (Jannah, 2020; Baker-Doyle, 2021). In Indonesia, this need has become increasingly urgent, given the challenges of infrastructure and unequal access to technology across regions, particularly in rural areas such as Limbangan Subdistrict, Kendal Regency. Despite these limitations, teachers are expected to serve as effective agents of change—capable of integrating technology into instruction and continuously developing themselves professionally to provide education that is relevant to the demands of the times.

Previous research has highlighted the important role of teacher leadership in supporting digital-based educational transformation. Teachers with strong leadership skills play a critical role in driving instructional innovation, fostering adaptive school cultures, and enhancing collective engagement in the use of technology (Leithwood et al., 2020; Fawaid et al., 2025). In addition, active participation in learning communities serves as a strategic factor in teachers' professional development. Studies by DuFour and DuFour (2013) and Affandi et al. (2022) show that learning communities provide a platform for teachers to collaborate, share experiences, and develop innovative solutions to modern educational challenges. However, most of these studies have focused on urban contexts with relatively better resources, while research that explores the realities in under-resourced rural areas like Limbangan remains limited. Furthermore, the relationship between teacher leadership, participation in learning communities, and the development of learning agility competencies has not been extensively explored in an integrative manner. Learning agility, defined as the ability of individuals to quickly learn from experience and apply that learning effectively in new situations (De Meuse et al., 2010), is a critical competency in the digital age. Although several studies have acknowledged the importance of learning agility in education (Santoso & Yuzarion, 2021; Akbar et al., 2022), the integration of this concept with teacher leadership and learning communities remains

underexplored—particularly in the context of elementary education in rural areas. Existing studies tend to examine learning agility in general, without delving into the factors that influence its development among elementary school teachers, such as leadership dynamics and professional community interactions. Therefore, there is a notable gap in the literature that calls for a more comprehensive and context-specific investigation.

Based on this analysis, the present study aims to empirically examine the influence of teacher leadership and participation in learning communities on the learning agility of elementary school teachers in Limbangan Subdistrict, Kendal Regency. The research questions posed include: (1) Does teacher leadership influence the learning agility of elementary school teachers? (2) Does participation in learning communities influence their learning agility? (3) Do teacher leadership and participation in learning communities simultaneously affect teachers' learning agility? The novelty of this study lies in its effort to integrate these three concepts within a single analytical framework in a region facing significant digitalization challenges. This study is expected to enrich the body of literature in educational management and provide practical contributions to the formulation of teacher capacity development strategies in support of digital transformation in rural education.

LITERATURE REVIEW

Learning Agility in Education

Learning agility refers to an individual's willingness and ability to learn from experience and apply that learning to new and challenging situations (Khambari et al., 2022; De Meuse, 2010). In the context of education, this competency is particularly important as teachers face an increasingly dynamic learning environment shaped by rapid technological change. Learning agility encompasses a set of dimensions including mental agility, people agility, change agility, results agility, and self-awareness (Lombardo & Eichinger, 2000; Santoso & Yuzarion, 2021). These dimensions are further expanded by other scholars to include emotional, digital, cultural, and strategic agility (Altman, 2017; Hargreaves, 2018; Caligiuri, 2023), highlighting the complexity and relevance of this construct in the professional development of educators.

Despite growing recognition of its importance, most studies on learning agility have focused on general workplace contexts or higher education, with limited attention given to its development in elementary school teachers, especially in rural areas. Furthermore, few studies have explored how school-based factors such as leadership and professional collaboration impact teachers' learning agility.

Teacher Leadership as a Catalyst for Learning Agility

Teacher leadership is broadly defined as the capacity and willingness of teachers to influence, inspire, and guide peers, students, and school communities toward improved educational outcomes (York-Barr & Duke, 2004; Fullan, 2023). It encompasses both formal and informal roles, from instructional planning and mentoring to curriculum development and leading professional learning initiatives. Leithwood et al. (2020) emphasize four key dimensions of teacher leadership: building vision, developing people, managing resources, and improving teaching and learning processes.

Research suggests that teacher leadership can significantly enhance school innovation and create adaptive cultures essential for digital transformation (Hattie, 2023; Wenner & Campbell, 2017). However, much of this research has been conducted in urban settings with robust support structures. There remains a gap in understanding how teacher leadership functions under limited infrastructure and digital access, as commonly found in rural contexts.

Participation in Professional Learning Communities

Participation in professional learning communities (PLCs) is another key element in teacher development. Defined as collaborative groups where educators share practices, reflect critically, and develop innovative teaching strategies (DuFour & DuFour, 2013; Harlita & Ramadan, 2024), PLCs promote continuous professional learning and school improvement. Core dimensions of effective PLCs include shared leadership, collective inquiry, reflective dialogue, and a focus on student learning outcomes (Stoll et al., 2006; Vescio et al., 2008).

Despite the recognized benefits, implementation of PLCs often varies, and teachers in rural or under-resourced schools may face barriers to active participation, such as time constraints, lack of facilitation, or insufficient digital infrastructure. Moreover, while studies have examined the role of PLCs in improving teaching practices, their specific influence on teachers' learning agility remains underexplored.

Gaps and Contribution of the Current Study

While existing literature affirms the significance of teacher leadership and professional collaboration, few studies have examined their joint impact on learning agility, particularly within the context of elementary education in rural Indonesia. Additionally, there is a lack of empirical research integrating these three constructs—learning agility, teacher leadership, and participation in learning communities—within a single analytical framework.

This study aims to address these gaps by investigating the extent to which teacher leadership and participation in learning communities influence the learning agility of elementary school teachers in Limbangan Subdistrict, Kendal Regency. By doing so, it contributes to the broader discourse on digital transformation in education and offers practical insights for capacity-building in rural teaching contexts.

METHOD

This study employs a quantitative approach using explanatory research design aimed at examining causal relationships among variables through hypothesis testing. The research is structured associatively, focusing on the influence of teacher leadership (X1) and participation in learning communities (X2) on the learning agility (Y) of elementary school teachers in Limbangan Subdistrict, Kendal Regency. This approach was chosen due to its capacity to objectively address research questions using appropriate statistical analyses. The study design incorporates independent variables (teacher leadership and participation in learning communities) and a dependent variable (learning agility), following a relational framework illustrated in the research model.

The population of this study consists of all public elementary school teachers in Limbangan, totaling 209 individuals across 30 schools. Sampling was conducted using proportionate stratified random sampling, considering the stratified characteristics of the population. The sample size was determined using Slovin's formula with a 5% margin of error, resulting in 137 respondents proportionally selected from each school. This sampling technique ensures representativeness, enabling generalization of the findings with valid results.

Data were collected using a Google Form-based questionnaire developed from a detailed instrument blueprint aligned with the three research variables: teacher leadership, participation in learning communities, and learning agility. Each variable was measured using a five-point Likert scale, with dimensions and indicators derived from established theories—such as DeRue et al. (2012) for learning agility and Leithwood et al. (2020) for teacher leadership. Prior to data collection, the instrument was tested for validity and reliability using product moment correlation and Cronbach's Alpha. Results confirmed that all items were valid (r-count > r-table) and reliable (Cronbach's Alpha > 0.60), making the instrument suitable for the main survey.

The data analysis was conducted in several stages. First, prerequisite tests were performed to ensure the assumptions of the regression model were met, including normality (Kolmogorov-Smirnov test), multicollinearity (Tolerance and VIF), autocorrelation (Durbin-Watson test), and heteroscedasticity (Glejser test). Subsequently, multiple linear regression analysis was used to assess the simultaneous effects of the independent variables on the dependent variable. Partial effects were examined using t-tests, while overall model significance was tested using an F-test. The coefficient of determination (R^2) was used to evaluate the explanatory power of the independent variables. Additionally, Pearson's correlation coefficient was employed to analyze the strength and direction of relationships between variables, following interpretation guidelines from Ghozali (2018).

All research procedures were systematically organized—from instrument development, validation testing, and data collection to data analysis—ensuring replicability by future researchers. Detailed descriptions of the research setting, sampling techniques, instrument development, and analysis methods have been included to ensure transparency and verifiability. With this comprehensive methodological design, the study aims to yield valid and reliable results, contributing meaningfully to the scientific discourse on digital-based educational management in rural contexts.

RESULTS AND DISCUSSION

This study investigated the influence of teacher leadership and participation in learning communities on teachers' learning agility in public elementary schools in Limbangan District, Kendal Regency. Based on questionnaire responses from 137 participants, descriptive analysis revealed that teacher leadership had a mean score of 144.21, learning community participation scored 165.96, and learning agility had a mean score of 187.26. All three variables were categorized as "good."

Transformational leadership emerged as the strongest dimension of teacher leadership (extraction value: 0.877), showing that teachers were capable of motivating, inspiring, and building strong relationships with students. This finding is consistent with Bass and Avolio (1994), who emphasized that transformational leaders inspire followers to exceed expectations by focusing on vision, individual consideration, and intellectual stimulation. In

contrast, instructional leadership scored the lowest (extraction value: 0.730), indicating challenges in designing differentiated and data-driven learning. This aligns with Leithwood and Jantzi (2006), who noted that while transformational leadership enhances motivation, effective instructional leadership is necessary to improve teaching practices directly.

The t-test confirmed that teacher leadership had a positive and significant effect on learning agility ($p = 0.000 < 0.05$; $\beta = 0.829$). A strong correlation ($r = 0.821$) indicated a close relationship between teacher leadership and learning agility. This supports findings by Ng (2017), who found that leadership practices focused on teacher empowerment and development significantly enhance professional adaptability and learning responsiveness. Similarly, Joo, Lim, & Kim (2016) highlighted that leaders who support teacher autonomy and professional growth foster higher learning agility.

In terms of participation in learning communities, the collaboration dimension scored highest (0.873), while shared leadership scored lowest (0.560). These results reflect that teachers were active in knowledge sharing but still hesitant to take on leadership roles within the group. The t-test revealed no significant effect of learning community participation on learning agility ($p = 0.514 > 0.05$; $\beta = 0.039$). Although this contradicts some studies, such as Vescio, Ross, & Adams (2008), which found that professional learning communities enhance reflective practice and improve teacher outcomes, it is supported by DuFour & Eaker (1998), who argued that for PLCs to be effective, they must go beyond structural participation and foster meaningful engagement and distributed leadership.

The regression analysis revealed that teacher leadership and learning community participation together significantly influenced learning agility ($F = 139.338$; $p < 0.05$), with an adjusted R^2 of 0.670, meaning 67% of the variation in learning agility could be explained by these two variables. This supports the findings of Hargreaves and Fullan (2012), who stated that sustainable improvement in teaching requires a balance of strong individual leadership and collaborative capacity-building.

Further analysis of the learning agility dimensions showed that results agility had the highest score (0.894), followed by change agility (0.881), while mental agility scored the lowest (0.740). These findings indicate that while teachers are outcome-driven and adaptable, they may lack the cognitive flexibility needed for critical and creative thinking. This echoes De Meuse, Dai, & Hallenbeck (2010), who emphasized that mental agility is the most challenging dimension of learning agility to develop and is often hindered by rigid institutional cultures and limited time for reflection. Additionally, research by Mudzimiri et al. (2014) found that administrative burdens and lack of time are significant barriers to teachers' deeper cognitive engagement.

These findings highlight a positive and reciprocal relationship: strong leadership practices promote participation, which enhances agility, while improved agility feeds back into leadership and collaboration. However, the low levels of shared leadership and mental agility suggest a need for interventions such as integrated training, reduction of administrative workload, and reinforcement of action research practices. As Darling-Hammond et al. (2017) suggest, creating a professional culture of inquiry, supported by structured mentoring and collaborative decision-making, is crucial for fostering innovation and learning agility.

This study aligns with and extends existing research by showing that transformational teacher leadership plays a pivotal role in enhancing teachers' adaptability and professional growth. However, participation in learning communities must be deep, inclusive, and leadership-oriented to produce meaningful improvements in learning agility. Strengthening these elements through policy and professional development initiatives will be essential for preparing teachers to thrive in an era of rapid educational change.

CONCLUSION

This study concludes that teacher leadership has a significant and positive influence on the learning agility of public elementary school teachers in Limbangan District, Kendal Regency. The results of the t-test showed that the regression coefficient for teacher leadership was 0.829 with a significance value of 0.000, which is below the threshold of 0.05. Furthermore, the correlation coefficient between teacher leadership and learning agility was 0.821, indicating a very strong relationship. Among the leadership dimensions, transformational leadership was the most dominant, with an extraction value of 0.877. This suggests that when teachers are able to motivate, inspire, and guide students effectively, their ability to adapt and learn also increases.

On the other hand, the participation of teachers in learning communities, while descriptively rated as good, was not found to have a statistically significant impact on learning agility. The regression coefficient for this variable was only 0.039, with a significance value of 0.514, indicating that, independently, this factor does not influence learning agility. However, the dimension of collaboration scored high (0.873), showing that teachers are actively involved in sharing knowledge and working together. The weakest dimension was shared leadership (0.560),

suggesting that many teachers are still passive and not yet actively leading initiatives within their professional learning communities.

Nevertheless, when both teacher leadership and participation in learning communities were tested together, they were found to have a significant simultaneous influence on learning agility. This was shown by the F-test result of 139.338 with a significance value of 0.000. The adjusted R square value was 0.670, indicating that 67% of the variation in learning agility can be explained by these two factors combined. This finding demonstrates that while learning community participation alone may not significantly influence agility, it contributes meaningfully when integrated with strong teacher leadership.

In addition, the analysis of learning agility dimensions revealed that results agility had the highest extraction score (0.894), while mental agility had the lowest (0.740). This shows that teachers are generally able to meet performance targets and adapt to change, but may lack critical and creative thinking skills essential for developing innovative teaching strategies. These weaknesses may stem from factors such as insufficient training in higher-order thinking skills, rigid school cultures, and administrative burdens that limit time for professional reflection.

Based on these findings, it is recommended that future development efforts focus on strengthening instructional leadership, promoting shared leadership roles within teacher communities, and enhancing teachers' mental agility through reflective practice and innovation. Schools should also reduce administrative workloads to give teachers more time for collaboration and experimentation. A structured mentoring system that encourages peer learning and leadership sharing can also play a vital role in boosting learning agility. These strategies are expected to foster a more adaptive, collaborative, and innovative professional culture among elementary school teachers.

REFERENCES

Affandi, L. H., Candiasa, I. M., Lede, Y. U., Bayangkari, B., & Prijanto, J. H. (2022). Strategi Peningkatan Kinerja Guru Melalui Pengembangan Kelompok Kerja Guru (Kkg) Sebagai Komunitas Belajar. *Jurnal Education And Development*, *10*(3), 401–407. https://doi.org/10.37081/ed.v10i3.4173

Akbar, A. A., Rohmiasih, C., Rohmiati, C., & Hanum, N. C. (2022). *Urgensi Learning Agilty dalam Menjawab Pendidikan Karakter di Era 4.0*.

Altman, W. (2017). *Agility in the digital age: The evolution of leadership competence*. Harvard Business Review. https://hbr.org

Baker-Doyle, K. J. (2021). *Transformative teachers: Teacher leadership and learning in a connected world*. Harvard Education Press.

Caligiuri, P. (2023). *Cultural agility: Building a pipeline of successful global professionals*. John Wiley & Sons.

De Meuse, K. P., Dai, G., & Hallenbeck, G. S. (2010). Learning agility: A construct whose time has come. *Consulting Psychology Journal: Practice and Research*, *62*(2), 119. https://psycnet.apa.org/doi/10.1037/a0019988

DeRue, D. S., Ashford, S. J., & Myers, C. G. (2012). Learning agility: In search of conceptual clarity and theoretical grounding. *Industrial and Organizational Psychology*, *5*(3), 258–279.

DuFour, R., & DuFour, R. (2013). *Learning by doing: A handbook for professional learning communities at work TM*. Solution Tree Press.

Fawaid, M. I., Akmal, M. H., Nurdin, M. R., & Islammudin, Z. (2025). Digitalisasi Pendidikan dan Peran Guru Sebagai Pemimpin: Studi Tentang Teknologi Informasi di Indonesia. *Prosiding Nasional Pendidikan: LPPM IKIP PGRI Bojonegoro*, *6*(1), 385–398.

Fullan, M. (2023). *The new meaning of educational change* (6th ed.). Teachers College Press.

Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25*. Badan Penerbit Universitas Diponegoro.

Hargreaves, A. (2018). *Collaborative professionalism: When teaching together means learning for all*. Corwin Press.

Harlita, I., & Ramadan, Z. H. (2024). Peran Komunitas Belajar di Sekolah Dasar dalam Mengembangkan Kompetensi Guru. *Didaktika: Jurnal Kependidikan*, *13*(3), 2907–2920. https://doi.org/10.58230/27454312.989

Hattie, J. (2023). A Set of Challenges for Differentiated Instruction. *AROUND THE WORLD*, 275.

Jannah, L. K. (2020). Kepemimpinan Kepala Sekolah dalam Menghadapi Era Revolusi Industri 4.0: Perspektif Manajemen Pendidikan. *Islamika*, *2*(1), 129–139. https://doi.org/10.36088/islamika.v2i1.471

Joo, B.-K., Lim, T., & Kim, S. (2016). Enhancing work engagement: The roles of psychological capital, authentic leadership, and work empowerment. *Leadership & Organization Development Journal, 37*(8), 1117–1134. https://doi.org/10.1108/LODJ-01-2015-0005

Khambari, M. N., Wong, S. L., Zakaria, N. S., & Abdullah, K. (2022). *Identifying the Dimensions of Teachers' Digital Learning Agility in the Age of Exponential Technology Use*.

Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, *40*(1), 5–22. https://doi.org/10.1080/13632430701800060

Lombardo, M. M., & Eichinger, R. W. (2000). High potentials as high learners. *Human Resource Management*, *39*(4), 321-329.Rini, H. P. (2023). Urgensi Learning Agility Guru sebagai Ujung Tombak Pendidikan. *Journal of Education for All*, *1*(2), 163–170. https://doi.org/10.61692/edufa.v1i2.42

Mudzimiri, R., Zehavi, N., & Beasley, H. (2014). Instructional leadership and teaching practices: Lessons from a successful urban elementary school. *Journal of Research in Education, 24*(2), 123–135.

Ng, P. T. (2017). Learning from Singapore: The power of paradoxes. *Educational Research for Policy and Practice, 16*(2), 167–181. https://doi.org/10.1007/s10671-016-9204-4

Santoso, A. M., & Yuzarion, Y. (2021). Analysis of learning agility in the performance of achievement teachers in Yogyakarta. *Pedagogik: Jurnal Pendidikan*, *8*(1), 77–122. https://doi.org/10.33650/pjp.v8i1.2126

Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change, 7*(4), 221–258. https://doi.org/10.1007/s10833-006-0001-8

Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education, 24*(1), 80–91. https://doi.org/10.1016/j.tate.2007.01.004

Vinesian, G. T., Suryanto, S., & Sari, R. L. (2023). Factors Related to Learning Agility: A Systematic Literature Review. *Journal of Business Studies and Mangement Review*, *6*(2), 182–186. https://doi.org/10.22437/jbsmr.v6i2.24817

Wenner, J. A., & Campbell, T. (2017). The theoretical and empirical basis of teacher leadership: A review of the literature. *Review of Educational Research*, *87*(1), 134–171.

York-Barr, J., & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Educational Research*, *74*(3), 255–316.