

Adaptive Leadership in Academic Supervision for Deep Learning at MAN 2 Tanah Datar

Silvia Susrizal¹, Nur Azizah², Merri Yelliza³, Susi Ratna Sari⁴, Mega Adhyna Movitaria⁵, Syahrur Ramli⁶, Yoga Habibullah⁷, and Ramza Husmen⁸

Universitas Islam Negeri Mahmud Yunus Batusangkar, Indonesia¹⁻⁸

E-mail Corresponding: silviasusrizal@uinmybatusangkar.ac.id

Received: June 11, 2026

Revised: August 20, 2026

Accepted: September 17, 2026

Abstract

This study examines how adaptive leadership is interpreted in academic supervision for deep learning-oriented Islamic Religious Education (PAI) at MAN 2 Tanah Datar. It addresses the tension between supervision as an administrative requirement and supervision as professional support for pedagogical change. A descriptive qualitative approach within a constructivist paradigm was employed, involving semi-structured interviews with 27 PAI teachers, one madrasah principal, and one vice principal for curriculum affairs (29 participants). Interview accounts were examined through thematic analysis and source triangulation across participant roles. The analysis identified three interrelated patterns: open communication and participatory decision-making, mentoring and professional support, and the use of local Minangkabau cultural references to interpret supervisory relationships. These patterns indicate a collaborative and developmental orientation to supervision, while the available interview evidence does not demonstrate measured changes in classroom practice or student learning. The findings are interpreted through adaptive leadership and culturally responsive school leadership, with deep learning treated as the pedagogical orientation of supervision rather than an empirically measured outcome. The study contributes a context-sensitive account of how formal supervision can be mediated by locally meaningful communication and deliberation. Practically, it suggests that madrasah leaders should connect dialogic supervision and mentoring to specific instructional decisions and follow-up, while future research should verify these relationships through classroom observation, documentary evidence, and longitudinal designs.

Keywords: Academic Supervision, Adaptive Leadership, Culturally Responsive Leadership, Deep Learning, Madrasah

INTRODUCTION

Deep learning-oriented academic supervision directs attention to the quality of learning processes alongside teachers' instructional documentation. In this study, deep learning refers to meaningful conceptual understanding, critical reasoning, reflection, and the application of knowledge in educational contexts (Fullan et al., 2018). Supervision therefore needs to consider how teachers plan demanding tasks, elicit students' reasoning, and use feedback to support understanding. Its developmental purpose is to help teachers examine instructional decisions and identify areas for improvement. Research on school heads' clinical supervision highlights the relevance of professional support and supervisory interaction to teacher development (Chaula et al., 2024). These concerns frame the examination of leadership and supervision at MAN 2 Tanah Datar.

Strengthening teachers' competencies through continuous professional development is relevant to academic supervision oriented toward deep learning. However, providing training or introducing digital tools does not by itself explain how leaders respond to teachers' needs during

supervision. Berkovich and Hassan (2025) examine digital transformational leadership in relation to teacher commitment and school effectiveness, whereas Chaula et al. (2024) focus on school heads' clinical supervision practices. These studies inform different aspects of leadership and professional support. They do not directly explain how adaptive responses to supervisory challenges are enacted within the cultural and organizational setting of this madrasah. The present inquiry therefore focuses on leadership practices and their interpretation in this specific setting. Recent evidence also indicates that school leadership contributes to teacher professional learning and instructional practice through mechanisms such as trust, collaborative learning, and sustained professional support rather than through formal authority alone (Bellibaş & Gümüş, 2023; Bellibaş et al., 2021; Dorukbaşı & Cansoy, 2024; Abbaspour et al., 2024). This shifts the analytical question from whether supervision occurs to how supervisory interactions create conditions in which teachers can examine, discuss, and potentially revise instructional practice. Evidence from diverse systems likewise shows that principals can support professional learning through instructional and distributed leadership, administrative support, teacher agency, trust, and opportunities for teachers to participate in instructional improvement (Alazmi & Hammad, 2023; Alsaleh, 2022; Amzat et al., 2022; Huang et al., 2023; Liu & Hallinger, 2021; Pan & Chen, 2021).

The research gap concerns how adaptive leadership is expressed in everyday supervisory relationships and how locally meaningful communication practices shape teachers' participation. MAN 2 Tanah Datar provides a bounded setting in which these relationships can be examined alongside Minangkabau cultural references. Its analytical value lies in the opportunity to study the interaction between formal supervisory responsibilities and locally interpreted expectations of respectful dialogue and collective deliberation. Culturally responsive school leadership provides a relevant perspective on the relationship between leadership, community context, and inclusion (Khalifa et al., 2016). The case is examined for contextual understanding, without assuming that it is representative of other madrasahs or that local culture necessarily produces better educational outcomes. Recent culturally responsive leadership scholarship further emphasizes that culturally meaningful leadership depends on sustained relationships, trust, attention to voice, and the connection between leadership and pedagogical practice rather than the symbolic use of cultural language alone (Banwo, 2022; Highfield et al., 2024; Mansfield & Lambrinou, 2024). This perspective is particularly relevant for examining whether local cultural references shape participation in supervision and how such references interact with formal leadership responsibilities. Comparative and case-based research further indicates that culturally responsive leadership requires reflexivity, inclusive participation, attention to community context, and the capacity to translate cultural understanding into leadership practice (Brown et al., 2022; Genao, 2021; Longmuir et al., 2022; Savvopoulos et al., 2024).

Accordingly, the contribution of this study lies in bringing adaptive leadership, academic supervision, deep-learning-oriented pedagogy, and locally meaningful Minangkabau communication practices into a single context-sensitive analysis. Rather than proposing a universally applicable leadership model, the study examines how these domains intersect in everyday supervisory relationships in a madrasah setting, an intersection that remains comparatively underexplored in the literature cited above.

This study aims to examine adaptive leadership in academic supervision for deep learning-oriented PAI at MAN 2 Tanah Datar. It addresses two research questions: (1) What leadership practices are described in the supervisory relationships at this madrasah? (2) How are these practices interpreted in relation to professional support, local cultural expectations, and pedagogical change? The study seeks a contextual explanation of supervisory practice. It does not test an intervention or establish the effectiveness of a new supervision model.

Theoretical Support

Adaptive leadership provides the principal conceptual lens. Heifetz et al. (2009) distinguish

challenges that can be addressed through established expertise from challenges that require people to reconsider assumptions and develop new practices. In academic supervision, this distinction directs attention to how leaders identify teachers' difficulties, invite participation, and support changes in instructional practice. Open communication and mentoring may be relevant to adaptive work, but they are not sufficient evidence of adaptation by themselves. Their interpretation requires attention to the specific challenge, the response adopted, and the professional learning associated with that response. Recent research on school leadership under complex change likewise highlights adaptability, agility, capacity-building, and context-sensitive responses as important leadership resources, while cautioning that adaptation should be demonstrated through how leaders and professionals respond to concrete challenges rather than inferred from flexibility alone (Fernandes et al., 2023; Aldridge & McLure, 2024). Research on leadership for professional learning similarly emphasizes sustained, collaborative, and reflective structures through which leaders and educators can interpret challenges, build capacity, and develop context-responsive responses over time (Faizuddin et al., 2022; Pashmforoosh et al., 2023; Poekert et al., 2020).

Academic supervision is understood here as professional support directed toward the examination and improvement of instruction. This perspective emphasizes constructive feedback and teacher learning rather than the completion of administrative requirements alone (Chaula et al., 2024). Deep learning supplies the pedagogical focus: supervisory discussion should attend to the quality of students' reasoning, reflection, and application of knowledge (Fullan et al., 2018). Leadership practice, supervisory interaction, and pedagogical quality are therefore related analytical domains. Evidence in one domain, such as collegial relationships, cannot automatically establish improvement in another, such as students' conceptual understanding. This distinction is supported by contemporary research showing that leadership influences instructional practice partly through teacher professional learning, trust, collaboration, and opportunities to reflect on practice (Bellibaş & Gümüş, 2023; Bellibaş et al., 2021; Dorukbaşı & Cansoy, 2024). Qualitative evidence from centralized education systems similarly emphasizes principals' role in creating collaborative learning cultures and providing professional support (Abbaspour et al., 2024). Comparable evidence also links principals' instructional leadership with teachers' professional development (He et al., 2024). Related studies show that the effects of instructional leadership on practice are frequently mediated through shared practice, teacher responsibility, agency, self-efficacy, and professional learning communities rather than through leadership behavior alone (Bellibaş et al., 2022; Liu & Hallinger, 2024; Thien & Liu, 2024). Professional learning research also highlights the importance of teacher agency, meaningful professional goals, reflection, and opportunities to adapt learning to local practice (Longhurst et al., 2022; Robertson et al., 2024; Zhang & Peng, 2024).

A culturally responsive perspective helps interpret how supervisory relationships are situated within local expectations (Khalifa et al., 2016). *Kato Nan Ampek* is a Minangkabau communication framework that attends to relationships and social position in interaction (Chaniago & Alfikri, 2022). Its relevance to supervision lies in how respectful communication is enacted, rather than in the use of cultural terminology alone. AI provides an additional context for professional learning. UNESCO's guidance emphasizes human agency and the pedagogical and ethical evaluation of generative AI (Miao & Holmes, 2023). These ideas guide discussion of supervisory needs; they do not establish that AI was used or evaluated in this study. More recent studies extend this perspective by showing that culturally responsive leadership is enacted through relationships, trust, capacity building, attention to stakeholder voice, and links between leadership and culturally responsive pedagogy (Banwo, 2022; Highfield et al., 2024; Mansfield & Lambrinou, 2024). These studies reinforce the need to examine what cultural references do within leadership interactions, not merely whether they are mentioned.

METHODS

This study employed a descriptive qualitative approach within a constructivist paradigm to examine academic supervision at MAN 2 Tanah Datar. The participants comprised 27 Islamic Religious Education (PAI) teachers, one madrasah principal, and one vice principal for curriculum affairs, totaling 29 participants. The inquiry focused on participants' accounts of leadership, supervisory relationships, professional support, and pedagogical change. Its purpose was to develop a contextual interpretation of practice within this madrasah rather than to estimate statistical relationships or causal effects. The participant group therefore incorporated the teacher perspective together with two formal leadership roles directly associated with curriculum and academic supervision. The unit of interpretation was participants' interview-based accounts of supervisory practice; it was not an independently observed measure of classroom instruction, teacher performance, or student outcomes.

Data were collected through semi-structured interviews. The interview accounts were examined using thematic analysis and source triangulation across teachers and the two leadership roles. Thematic analysis concerns patterns of meaning relevant to the research questions; transparent reporting needs to distinguish descriptive codes from interpretive themes and make the basis of each interpretation explicit (Braun & Clarke, 2021, 2022). In this study, source triangulation refers to comparison across participant perspectives. The interpretation is restricted to the interview-based design described above. Table 1 sets out conceptual domains for examining leadership and supervision; it serves as an analytical guide rather than a quantitative measurement instrument. For interpretive reporting, source triangulation is treated as comparison across perspectives rather than as proof that any single account is objectively correct. The analysis therefore gives attention to convergence and role-specific emphasis across teacher and leadership accounts while maintaining the boundary between reported experience and observed instructional change. Because the design described in the manuscript is interview-based, the findings are restricted to participants' accounts and do not infer classroom change from observation or documentary evidence that was not collected.

Table 1. Conceptual Domains for Examining Leadership and Academic Supervision

Domain	Working definition	Evidence relevant to interpretation
Adaptive leadership	Responses to professional challenges requiring changes in understanding or practice.	Accounts of a specific challenge, a negotiated response, and subsequent professional learning.
Academic supervision	Professional support focused on examining and improving instruction.	Examples of dialogue, feedback, mentoring, and follow-up linked to instructional decisions.
Deep learning pedagogy	Meaningful understanding, reasoning, reflection, and application of knowledge.	Accounts of learning tasks, teacher questions, student reasoning, or assessment feedback.
Cultural mediation	Locally interpreted expectations of respectful communication and collective deliberation.	Examples showing how cultural expectations shape participation or responses to disagreement.

Note. The domains provide conceptual guidance for interpretation and do not constitute a validated measurement scale.

RESULTS AND DISCUSSION

Results

The findings were derived from semi-structured interview accounts involving 29 participants at MAN 2 Tanah Datar. The participant group consisted of 27 Islamic Religious Education (PAI) teachers, one madrasah principal, and one vice principal responsible for curriculum affairs. The analysis focused on participants' descriptions of academic supervision, leadership relationships,

professional support, locally meaningful communication practices, and their perceived connection with pedagogical change. Because the study was based exclusively on interview accounts, the results reported in this section represent participants' experiences and descriptions rather than independently observed changes in classroom instruction, teacher performance, or student learning outcomes. copyedit ISEJ Silvia 2462

Table 1. Participant Composition

Participant role	<i>n</i>	Percentage
Islamic Religious Education (PAI) teachers	27	93.10%
Madrasah principal	1	3.40%
Vice principal for curriculum affairs	1	3.40%
Total	29	100.00%

Thematic analysis identified three recurring patterns in participants' accounts: (1) open communication and participatory decision-making, (2) mentoring and professional support, and (3) local cultural references in supervision. The first two themes primarily addressed the leadership practices described by participants, whereas the third captured how supervisory practices were articulated through locally meaningful Minangkabau concepts. Across the three themes, participants described supervision predominantly in relational and professional-support terms. However, the interview data did not independently document whether these supervisory practices produced measurable changes in instructional behavior or student learning. copyedit ISEJ Silvia 2462

Table 2. Summary of Major Themes Identified in the Interview Accounts

Theme	Main pattern reported	Examples of reported supervisory features	Evidentiary boundary
Open communication and participatory decision-making	Supervision was described as dialogic and participatory	Reciprocal communication, collective deliberation, opportunities to discuss supervisory concerns	Does not establish the frequency of participation or direct instructional change
Mentoring and professional support	Leadership was described as supportive and developmental	Guidance, attention to professional concerns, informal opportunities to discuss difficulties	Does not independently demonstrate improvement in teaching, confidence, or student outcomes
Local cultural references in supervision	Supervisory relationships were described through Minangkabau concepts	<i>Kato Nan Ampek, Duduak Bersamo Balapang-lapang, and the Niniak Mamak</i> metaphor	Does not establish uniform interpretation or effectiveness across all participants

Open Communication and Participatory Decision-Making

The first recurring pattern concerned the organization of supervisory communication. Participants described academic supervision as involving reciprocal communication rather than relying exclusively on unilateral instructions from formal leaders. Supervisory issues were reportedly discussed through dialogue, and teachers were positioned as contributors to professional conversations concerning educational and supervisory matters. Collective deliberation was also described as part of the process through which concerns could be raised and considered.

The accounts therefore showed that supervisory interaction was not described solely as

inspection or administrative compliance. Instead, participants referred to opportunities for teachers to communicate concerns, discuss relevant issues, and participate in deliberative processes. The presence of such practices was reported across the interview material used in the thematic analysis. However, the available data did not quantify how often participatory discussions occurred, how many teachers actively contributed to each decision, or whether all teachers experienced participation in the same way. The interview dataset likewise did not document whether a specific supervisory discussion resulted in a particular modification of lesson planning, instructional strategy, assessment practice, or classroom interaction.

Accordingly, the empirical result for this theme is limited to participants' descriptions of open communication, reciprocal dialogue, and participatory deliberation as features of supervisory relationships. The study does not contain observational or documentary data that could establish the extent to which these processes were enacted consistently across supervisory episodes. copyedit ISEJ Silvia 2462

Mentoring and Professional Support

The second theme concerned mentoring and professional support. Participants described leadership practices that included attention to teachers' professional difficulties and opportunities to seek guidance within the supervisory relationship. The principal's role was also described using a protective or custodial orientation, while less formal forums were reported as spaces in which teachers could communicate difficulties they experienced.

The interview accounts therefore contained descriptions of supervision that extended beyond formal evaluation. Teachers' concerns were reportedly acknowledged within professional conversations, and supervisory leadership was associated with guidance and support. These accounts indicated that participants perceived mentoring as part of academic supervision at MAN 2 Tanah Datar.

At the same time, the evidence available for this theme was relational rather than outcome-based. The interviews did not provide independently verified measures of teacher competence before and after mentoring, documented changes in instructional practice, or quantitative measures of professional confidence. Similarly, no student-performance data were collected to determine whether the reported mentoring practices were followed by changes in student achievement or classroom engagement.

Thus, the main empirical finding is that mentoring and professional support were recurrently described as components of the supervisory experience, particularly in relation to teachers' opportunities to communicate difficulties and receive guidance. The study does not establish the magnitude, duration, or instructional effect of this support. copyedit ISEJ Silvia 2462

Local Cultural References in Supervision

The third theme captured the presence of local Minangkabau cultural references in descriptions of academic supervision. Three expressions were particularly evident in participants' accounts: *Kato Nan Ampek*, *Duduak Bersamo Balapang-lapang*, and the *Niniak Mamak* metaphor. These cultural concepts were used to describe different aspects of communication, collective discussion, and leadership relationships.

Kato Nan Ampek appeared in relation to respectful forms of communication. Participants' descriptions connected supervisory interaction with culturally recognizable expectations regarding how communication should be adjusted to social relationships and positions. Within the interview material, the concept functioned as a vocabulary for describing respectful interpersonal communication in supervisory settings.

Duduak Bersamo Balapang-lapang was associated with collective deliberation. Participants used this cultural reference in describing shared discussion and the consideration of issues through communal engagement rather than through an exclusively hierarchical communication pattern. The interviews therefore documented the use of locally meaningful language to describe participatory aspects of supervisory interaction.

The *Niniak Mamak* metaphor was used in connection with the leader's relational position. In the participants' descriptions, this metaphor represented a protective and exemplary leadership role. It provided a locally recognizable way of describing expectations attached to leadership relations within the madrasah context.

The data, however, did not establish that all 29 participants interpreted these cultural expressions in exactly the same way. Nor did the interview evidence demonstrate that invoking locally familiar concepts eliminated disagreement, hierarchy, or resistance. The results therefore document the presence and use of these cultural references in participants' interpretations of supervision, without assigning them a uniform effect or assuming that cultural familiarity itself produced effective supervision. copyedit ISEJ Silvia 2462

Relationship Between the Three Themes

Across the interview accounts, the three themes appeared as interconnected elements of the reported supervisory environment. Open communication concerned how supervisory conversations were organized; mentoring and professional support concerned the assistance described within those interactions; and local cultural references provided language through which communication, deliberation, and leadership relationships were articulated.

Table 3. Alignment of Findings With the Research Questions

Research question	Relevant finding	Empirical evidence available
RQ1: What leadership practices are described in supervisory relationships?	Open communication and participatory decision-making	Participants described reciprocal dialogue and collective deliberation
	Mentoring and professional support	Participants described guidance, supportive interaction, and opportunities to communicate professional difficulties
RQ2: How are these practices interpreted in relation to professional support, local cultural expectations, and pedagogical change?	Minangkabau cultural references in supervision	<i>Kato Nan Ampek, Dudaak Bersamo Balapang-lapang</i> , and <i>Niniak Mamak</i> were used to describe communication and leadership relationships
	Pedagogical orientation toward deep learning	Deep learning was identified as the pedagogical direction of supervision, but classroom or student-level change was not independently measured

The findings collectively showed that participants described supervision most strongly in terms of relationship, professional support, participation, and cultural communication. The data were considerably less direct regarding the enacted characteristics of deep-learning-oriented classroom practice. Specifically, the interview evidence did not independently document changes in the complexity of classroom tasks, teachers' questioning practices, assessment feedback, students' reasoning, reflective activity, or students' conceptual understanding. These instructional dimensions were identified in the theoretical framework of the study, but they were not measured through classroom observation or student assessment. copyedit ISEJ Silvia 2462

Deep Learning as a Reported Pedagogical Orientation

The interview findings also referred to deep learning as an intended pedagogical orientation of academic supervision. Within the study, deep learning was defined in terms of meaningful conceptual understanding, critical reasoning, reflection, and the application of knowledge. copyedit ISEJ Silvia 2462 However, the results did not contain direct evidence of student-level deep-learning outcomes. No classroom observation, student achievement test, analysis of student work, or systematic evaluation of instructional artifacts was reported.

Consequently, the Results section distinguishes between two levels of evidence. The first level consists of reported supervisory practices: communication, deliberation, mentoring, guidance, and cultural references. These are directly represented in the interview-based findings. The second level concerns instructional and student outcomes, including changes in teaching practice, teacher confidence, conceptual understanding, student reasoning, or academic achievement. Such outcomes were not independently measured in the study. This distinction is reflected in Figure 1.

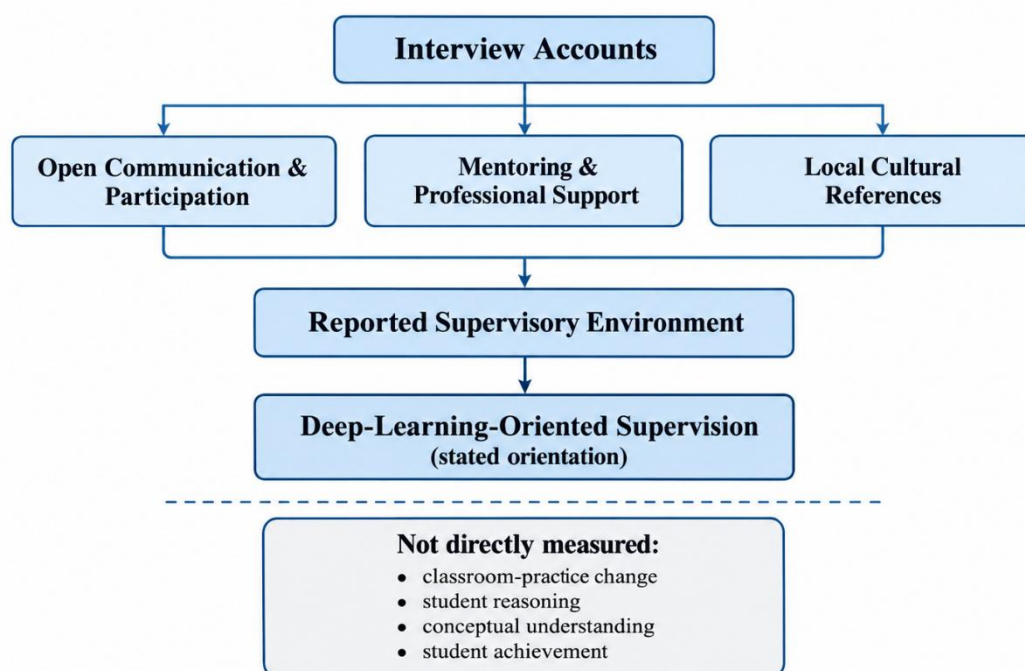


Figure 1. Empirical Scope of the Findings

Overall, the findings answer the first research question by identifying three principal features of supervisory relationships: open communication and participation, mentoring and professional support, and locally framed supervisory interaction. They address the second research question by showing that participants described professional support and communication partly through Minangkabau cultural concepts and by identifying deep learning as the pedagogical orientation toward which supervision was directed. The results do not demonstrate a causal pathway from these practices to pedagogical or student outcomes.

This boundary is particularly important because the original study was explicitly designed as a contextual qualitative inquiry rather than an intervention evaluation. Participants' accounts provide evidence of how supervision was experienced and described, but not of whether these supervisory practices caused changes in teaching or learning. The available evidence therefore supports reporting the three themes as characteristics of the supervisory context at MAN 2 Tanah Datar while reserving questions about effectiveness, classroom implementation, and learning outcomes for separate empirical investigation.

Discussion

The reported emphasis on dialogue and mentoring is consistent with a developmental understanding of academic supervision. Chaula et al. (2024) provide a relevant comparison concerning school heads' supervisory practices and teachers' professional development. An adaptive leadership interpretation requires a further step: identifying the professional challenge that prompted a response and how participants reconsidered their practice (Heifetz et al., 2009). Collegial relationships may create conditions for this work, but they should not be equated with demonstrated adaptation. The contribution of this case is therefore a contextual interpretation

of supervisory relationships rather than proof of a new leadership paradigm. This interpretation is consistent with recent evidence that principals can foster teacher professional learning by cultivating collaborative learning cultures, professional support, and opportunities for knowledge exchange (Abbaspour et al., 2024). It also aligns with studies indicating that the relationship between leadership and instructional practice is often mediated by teacher learning and related professional processes rather than operating as a simple direct effect (Bellibaş et al., 2021; Dorukbaşı & Cansoy, 2024). The present case extends that discussion by locating such supervisory relationships within a madrasah context and by examining the cultural meanings through which participation and support are described. This interpretation is also consistent with research showing that teacher leadership and collaborative professional learning can sustain learning during educational disruption, while coaching studies demonstrate that practice opportunities, feedback, and job-embedded support can contribute to changes in teachers' classroom practices (Chaaban et al., 2022; Glover et al., 2023; Reddy et al., 2021).

The local cultural references may help explain why particular forms of dialogue are considered appropriate in this setting. Chaniago and Alfikri (2022) discuss *Kato Nan Ampek* as a communication practice in a Minangkabau community; that study provides cultural context rather than evidence about this madrasah. Culturally responsive school leadership also emphasizes the relationship between leadership and community context (Khalifa et al., 2016). These perspectives support examination of how cultural expectations shape interaction. They do not justify assuming that all culturally familiar practices are inclusive. Respectful language and consensus-oriented deliberation should also be examined for differences in voice, opportunities to disagree, and participation across institutional roles. This caution is consistent with recent culturally responsive leadership research, which emphasizes that culturally responsive practice requires more than cultural recognition: it depends on trust, stakeholder voice, capacity building, and explicit connections between leadership and pedagogy (Banwo, 2022; Highfield et al., 2024; Mansfield & Lambrinou, 2024). In the present case, Minangkabau concepts are therefore best treated as locally meaningful resources for interpreting interaction whose practical inclusiveness must still be examined through actual participation, disagreement, and follow-up.

Theoretically, the findings suggest that adaptive leadership in academic supervision should not be reduced to leader flexibility, collegial communication, or cultural familiarity. Within this case, the concept is more productively understood as a relationship among a professional challenge, opportunities for teacher participation, culturally mediated communication, and professional support directed toward reconsidering instructional practice. This is an interpretive proposition generated from a bounded qualitative setting rather than a validated leadership model. It nevertheless extends the conceptual discussion by showing why relational and cultural conditions should be distinguished from evidence of pedagogical change itself.

The practical implication is to connect professional dialogue to specific instructional questions. Supervisory development could combine a shared focus on a learning task, feedback on students' reasoning, and a follow-up discussion of teachers' instructional decisions. This recommendation is consistent with the pedagogical emphasis of deep learning (Fullan et al., 2018), but it was not evaluated as an intervention here. Digital leadership research offers a related perspective on organizational support for technology use (Berkovich & Hassan, 2025). For AI, professional dialogue should address pedagogical suitability, human agency, and ethical evaluation (Miao & Holmes, 2023). These are proposed directions for development rather than findings about AI implementation at MAN 2 Tanah Datar. Operationally, madrasah leaders could translate these implications into a supervision cycle that begins with a focused instructional problem, uses pre- or post-supervision dialogue to examine evidence of student reasoning, and concludes with an agreed follow-up action. For teachers, this approach would position supervision as structured professional reflection rather than administrative inspection. For leadership development and policy, the findings suggest that supervisory competence should include culturally responsive communication, mentoring, evidence-informed feedback, and the ability to connect professional dialogue with concrete instructional decisions. These

recommendations are also aligned with evidence that sustained professional learning is strengthened when feedback, reflection, collaborative inquiry, teacher agency, and contextually meaningful follow-up are embedded in professional support rather than treated as one-off evaluation activities (Longhurst et al., 2022; Poekert et al., 2020; Robertson et al., 2024).

The inquiry concerns a single madrasah and an interview-based account of supervision. It supports interpretation of participants' perspectives but does not establish longitudinal change, causal relationships, or generalizability to other institutions. Claims about teacher confidence, professional growth, deep learning outcomes, and school effectiveness require evidence beyond the leadership descriptions presented here. The proposed supervisory directions remain recommendations for further examination. Future research could compare perspectives across institutions and examine the relationship between supervisory interaction and documented instructional practice. A further limitation is the reliance on self-reported interview accounts without classroom observation or documentary corroboration; consequently, alignment between reported supervision and enacted instructional practice cannot be independently assessed. Future studies should combine interviews with observation of supervisory and classroom interactions, analysis of supervision documents or teaching artifacts, and longitudinal follow-up to examine whether dialogic and culturally responsive supervisory practices are associated with documented changes in teaching.

CONCLUSION

This study offers a contextual interpretation of adaptive leadership in academic supervision at MAN 2 Tanah Datar. The reported practices center on open communication, participatory decision-making, mentoring, and the use of local cultural references to describe leadership relationships. Together, these practices suggest a collaborative and developmental orientation to supervision. Their relevance to deep learning lies in the potential to support professional dialogue about instruction; the study does not establish improvements in student learning or validate a new leadership theory. Its principal contribution is therefore not a claim that adaptive leadership causes deep learning, but a context-sensitive explanation of how collaborative supervision, professional support, and locally meaningful communication can coexist within the same supervisory setting and create conditions for pedagogical dialogue.

Madrasah leaders may use these insights to examine whether supervisory conversations address teachers' professional concerns and specific instructional decisions. Dialogue and cultural responsiveness should be assessed through actual participation and follow-up rather than assumed from leadership terminology. Further research is needed to examine how these relationships operate over time and how they connect to classroom practice. The findings and recommendations remain bounded to this case and should be interpreted within its methodological limits. For stronger empirical confirmation, subsequent research should test these interpretive propositions with multi-site designs and additional evidence from classroom observation, supervision records, teacher artifacts, and longitudinal change in instructional practice.

REFERENCES

- Abbaspour, F., Hosseingholizadeh, R., & Bellibaş, M. Ş. (2024). Uncovering the role of principals in enhancing teacher professional learning in a centralized education system. *International Journal of Educational Management*, 38(3), 873–889. <https://doi.org/10.1108/IJEM-12-2023-0654>
- Alazmi, A. A., & Hammad, W. (2023). Modeling the relationship between principal leadership and teacher professional learning in Kuwait: The mediating effects of trust and teacher agency. *Educational Management Administration & Leadership*, 51(5), 1141–1160. <https://doi.org/10.1177/17411432211038007>
- Aldridge, J. M., & McLure, F. I. (2024). Preparing schools for educational change: Barriers and supports—A systematic literature review. *Leadership and Policy in Schools*, 23(3), 486–511. <https://doi.org/10.1080/15700763.2023.2171439>

- Alsaleh, A. A. (2022). The influence of heads of departments' instructional leadership, cooperation, and administrative support on school-based professional learning in Kuwait. *Educational Management Administration & Leadership*, 50(5), 832–850. <https://doi.org/10.1177/1741143220953597>
- Amzat, I. H., Yanti, P. G., & Suswandari, S. (2022). Estimating the effect of principal instructional and distributed leadership on professional development of teachers in Jakarta, Indonesia. *SAGE Open*, 12(3). <https://doi.org/10.1177/21582440221109585>
- Banwo, B. O. (2022). Exploring trust: Culturally responsive and positive school leadership. *Journal of Educational Administration*, 60(3), 323–339. <https://doi.org/10.1108/JEA-03-2021-0065>
- Bellibaş, M. Ş., & Gümüş, S. (2023). The effect of learning-centred leadership and teacher trust on teacher professional learning: Evidence from a centralised education system. *Professional Development in Education*, 49(5), 925–937. <https://doi.org/10.1080/19415257.2021.1879234>
- 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>
- Berkovich, I., & Hassan, T. (2025). Principals' digital transformational leadership, teachers' commitment, and school effectiveness. *Education Inquiry*, 16(2), 177–194. <https://doi.org/10.1080/20004508.2023.2173705>
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352. <https://doi.org/10.1080/14780887.2020.1769238>
- Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE. <https://doi.org/10.53841/bpsqmp.2022.1.33.46>
- Brown, M., Altrichter, H., Shiyan, I., Rodríguez Conde, M. J., McNamara, G., Herzog-Punzenberger, B., Vorobyeva, I., Vangrando, V., Gardezi, S., O'Hara, J., Postlbauer, A., Milyaeva, D., Sergeevna, N., Fulterer, S., Gamazo García, A., & Sánchez, L. (2022). Challenges and opportunities for culturally responsive leadership in schools: Evidence from four European countries. *Policy Futures in Education*, 20(5), 580–607. <https://doi.org/10.1177/14782103211040909>
- Chaaban, Y., Sawalhi, R., & Du, X. (2022). Exploring teacher leadership for professional learning in response to educational disruption in Qatar. *Professional Development in Education*, 48(3), 426–443. <https://doi.org/10.1080/19415257.2021.1973070>
- Chaniago, I. A., & Alfikri, M. (2022). Communication of *Kato Nan Ampek* cultural perspective in Minangkabau community in Medan Denai District, Medan City. *Daengku: Journal of Humanities and Social Sciences Innovation*, 2(4), 472–479. <https://doi.org/10.35877/454RI.daengku1095>
- Chaula, L., Lawrent, G., & Freddie Warioba Iramba, I. (2024). School heads' clinical supervision practices in Tanzania: Implications for teachers' professional competency development. *Cogent Education*, 11(1), 2362551. <https://doi.org/10.1080/2331186X.2024.2362551>
- Dorukbaşı, E., & Cansoy, R. (2024). Examining the mediating role of teacher professional learning between perceived instructional leadership and teacher instructional practices. *European Journal of Education*, 59(3), e12672. <https://doi.org/10.1111/ejed.12672>
- Faizuddin, A., Azizan, N. A., Othman, A., & Ismail, S. N. (2022). Continuous professional development programmes for school principals in the 21st century: Lessons learned from educational leadership practices. *Frontiers in Education*, 7, 983807. <https://doi.org/10.3389/feduc.2022.983807>
- Fernandes, V., Wong, W., & Noonan, M. (2023). Developing adaptability and agility in leadership amidst the COVID-19 crisis: Experiences of early-career school principals. *International Journal of Educational Management*, 37(2), 483–506. <https://doi.org/10.1108/IJEM-02-2022-0076>
- Fullan, M., Quinn, J., & McEachen, J. (2018). *Deep learning: Engage the world change the world*. Corwin. <https://doi.org/10.4135/9781506368603>

- Genao, S. (2021). Doing it for culturally responsive school leadership: Utilizing reflexivity from preparation to practice. *Journal of Research on Leadership Education*, 16(2), 158–170. <https://doi.org/10.1177/19427751211002226>
- Glover, T. A., Reddy, L. A., & Crouse, K. (2023). Instructional coaching actions that predict teacher classroom practices and student achievement. *Journal of School Psychology*, 96, 1–11. <https://doi.org/10.1016/j.jsp.2022.10.006>
- He, P., Guo, F., & Abazie, G. A. (2024). School principals' instructional leadership as a predictor of teacher's professional development. *Asian-Pacific Journal of Second and Foreign Language Education*, 9, 63. <https://doi.org/10.1186/s40862-024-00290-0>
- Heifetz, R. A., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Harvard Business Press. <https://store.hbr.org/product/5764>
- Highfield, C., Webber, M., & Woods, R. (2024). Culturally responsive middle leadership for equitable student outcomes. *Education Sciences*, 14(3), 327. <https://doi.org/10.3390/educsci14030327>
- Huang, L., Huang, Y., & Zhou, S. (2023). Examining principal leadership effects on teacher professional learning in China: A multilevel analysis. *Educational Management Administration & Leadership*, 51(6), 1278–1300. <https://doi.org/10.1177/17411432211041626>
- Khalifa, M. A., Gooden, M. A., & Davis, J. E. (2016). Culturally responsive school leadership: A synthesis of the literature. *Review of Educational Research*, 86(4), 1272–1311. <https://doi.org/10.3102/0034654316630383>
- Liu, S., & Hallinger, P. (2021). Unpacking the effects of culture on school leadership and teacher learning in China. *Educational Management Administration & Leadership*, 49(2), 214–233. <https://doi.org/10.1177/1741143219896042>
- Liu, S., & Hallinger, P. (2024). The effects of instructional leadership, teacher responsibility and procedural justice climate on professional learning communities: A cross-level moderated mediation examination. *Educational Management Administration & Leadership*, 52(3), 556–575. <https://doi.org/10.1177/17411432221089185>
- Longhurst, M. L., Jones, S. H., & Campbell, T. (2022). Mediating influences in professional learning: Factors that lead to appropriation and principled adaptation. *Professional Development in Education*, 48(3), 506–522. <https://doi.org/10.1080/19415257.2021.1879220>
- Longmuir, F., Casinader, N., Prosser, H., & van Cuylenburg, P. (2022). Leadership of cultural education in the current age: An exploratory investigation of culturally responsive capacity through the lens of transculturalism. *Journal of Educational Administration and History*, 54(4), 420–439. <https://doi.org/10.1080/00220620.2022.2044293>
- Mansfield, K. C., & Lambrinou, M. (2024). Culturally responsive leadership: A critical analysis of one school district's five-year plan. *Frontiers in Education*, 9, 1385788. <https://doi.org/10.3389/feduc.2024.1385788>
- Miao, F., & Holmes, W. (2023). *Guidance for generative AI in education and research*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000386693>
- Pan, H.-L. W., & Chen, W.-Y. (2021). How principal leadership facilitates teacher learning through teacher leadership: Determining the critical path. *Educational Management Administration & Leadership*, 49(3), 454–470. <https://doi.org/10.1177/1741143220913553>
- Pashmforoosh, R., Irby, B. J., Lara-Alecio, R., & Tong, F. (2023). Building school leaders' instructional leadership capacity through virtual professional leadership learning communities. *Frontiers in Education*, 8, 1168734. <https://doi.org/10.3389/feduc.2023.1168734>
- Poekert, P. E., Swaffield, S., Demir, E. K., & Wright, S. A. (2020). Leadership for professional learning towards educational equity: A systematic literature review. *Professional Development in Education*, 46(4), 541–562. <https://doi.org/10.1080/19415257.2020.1787209>
- Reddy, L. A., Shernoff, E., & Lekwa, A. (2021). A randomized controlled trial of instructional coaching in high-poverty urban schools: Examining teacher practices and student outcomes. *Journal of School Psychology*, 86, 151–168. <https://doi.org/10.1016/j.jsp.2021.04.001>
- Robertson, D. A., Padesky, L. B., Thrailkill, L. D., Kelly, A., & Brock, C. H. (2024). Exploring the role of instructional leaders in promoting agency in teachers' professional learning. *International Journal of Professional Development, Learners and Learning*, 6(1), ep2402. <https://doi.org/10.30935/ijpdll/14058>

- Savvopoulos, D., Saiti, A., & Arar, K. (2024). The role of the school head in inclusion and culturally responsive leadership. *Journal of Educational Administration and History*, 56(2), 107–131. <https://doi.org/10.1080/00220620.2022.2122419>
- Thien, L. M., & Liu, P. (2024). Linear and nonlinear relationships between instructional leadership and teacher professional learning through teacher self-efficacy as a mediator: A partial least squares analysis. *Humanities and Social Sciences Communications*, 11, 7. <https://doi.org/10.1057/s41599-023-02500-5>
- Zhang, J., & Peng, Y. (2024). Unlocking teacher agency for professional learning through connection-building: Evidence from a professional development program on China's Standards of English Language Ability. *The Asia-Pacific Education Researcher*, 33(6), 1515–1523. <https://doi.org/10.1007/s40299-024-00914-6>