



Collaborative School Leadership Practices in Educational Partnerships to Support Deep Learning Implementation at SMAN 1 Muara Jawa

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ARTICLE INFO	ABSTRACT
Keywords: Collaborative Leadership; Deep Learning Implementation; Educational Partnerships; Principal Leadership; Stakeholder Engagement.	Deep learning has become an important approach in educational transformation by promoting more reflective, collaborative, and contextual learning. Its implementation requires collaborative school leadership practices in educational partnerships to support meaningful learning. This study aims to analyse the principal's collaborative leadership practices in educational partnerships to support deep learning implementation at SMAN 1 Muara Jawa. This study employed a qualitative descriptive approach. The participants consisted of the principal, two vice principals, and two teachers selected through purposive sampling. Data were collected through semi-structured interviews, observation, and document analysis and analysed using the interactive analysis model of Miles, Huberman, and Saldaña. The findings indicate that the principal's collaborative leadership practices were reflected in human resource development, academic supervision, internal and external collaboration, and the participatory formulation of the school's vision and strategic direction. According to the participants' perspectives, these practices were perceived to support the implementation of deep learning through professional collaboration, stakeholder engagement, and providing opportunities for more reflective, collaborative, and contextual learning. These findings provide a contextual empirical illustration of collaborative school leadership practices in educational partnerships as they were perceived to support the implementation of deep learning within the context of SMAN 1 Muara Jawa.
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INTRODUCTION

The changing landscape of 21st-century education has created new demands for educational provision across all levels of education. Advances in technology, scientific development, globalization, and the increasing complexity of social challenges require schools to function not only as institutions for knowledge transmission but also as environments that foster students' competencies, enabling them to think critically, creatively, collaboratively, communicate effectively, and adapt to change. In this context, the quality of learning has become a strategic factor in determining the success of education in preparing human resources capable of addressing future challenges. This situation highlights the need for schools to develop learning ecosystems that focus not only on academic achievement but also on cultivating adaptability, collaboration, creativity, and problem-solving skills as essential 21st-century competencies (Bahtiar & Qasabandiyah, 2025; OECD, 2023). Therefore, many countries, including Indonesia, continue to undertake educational reforms aimed at improving the quality of learning processes and strengthening students' competencies (Cindy et al., 2025; OECD, 2023).

One approach that has recently gained considerable attention in educational reform is deep learning. This approach positions students as active learners who construct understanding through

critical thinking, reflection, exploration, collaboration, and meaningful problem-solving. Deep learning is not merely concerned with mastering subject content; it also emphasizes students' ability to connect knowledge with real-life contexts, making learning more relevant and contributing to the development of both competencies and character (Halim, 2025; Hidayat & Lyesmaya, 2024). Through deep learning, students are expected not only to acquire knowledge but also to understand, apply, analyse, evaluate, and create solutions to various problems encountered in everyday life.

The urgency of implementing deep learning has become increasingly evident as various indicators of educational quality continue to show that learning quality remains a significant challenge. The results of the *Programme for International Student Assessment (PISA) 2022* indicate that Indonesian students' performance in reading, mathematics, and science remains below the average of OECD member countries (OECD, 2023). These findings suggest that many students still experience difficulties in developing a deep understanding of information, connecting concepts, and solving problems that require higher-order thinking skills (Halim, 2025). This situation highlights the need for schools to provide meaningful learning experiences that encourage students to develop a more comprehensive understanding.

Achieving deep learning cannot be accomplished by teachers working individually. Meaningful learning requires the support of an educational ecosystem that enables students to engage in rich, contextual, and sustainable learning experiences. From the perspective of an educational ecosystem, schools need to establish synergistic relationships with various stakeholders, including parents, school committees, local communities, business and industry, higher education institutions, professional organizations, and local governments (Ainscow, 2020; Epstein, 2018). According to Epstein (2018), school, family, and community partnerships are grounded in the Overlapping Spheres of Influence theory, which views schools, families, and communities as three primary environments that share common interests and responsibilities for students' educational success. These partnerships are realized through continuous collaboration, effective communication, shared decision-making, and the active involvement of stakeholders in supporting the learning process. Effective educational partnerships expand learning resources, enrich students' learning experiences, support school programmes, and create conditions that facilitate meaningful learning (Bryk et al., 2015).

Strong educational partnerships do not develop automatically but require leadership capable of integrating the diverse interests and resources of various stakeholders. In this context, school principals play a central role as educational leaders responsible for mobilizing all members of the school community toward the achievement of shared goals. As modern educational leadership paradigms have evolved, the role of school principals has expanded beyond administrative and managerial responsibilities to that of change agents who foster collaboration, empower school communities, and establish productive networks of cooperation (Hallinger, 2010; Harris, 2004). Collaborative leadership has emerged as a relevant leadership approach. This approach emphasises participation, communication, trust, and cooperation as the fundamental principles of educational organisation and management (Moore et al., 2023). Similarly, Heikonen & Ahtiainen (2025) explain that collaborative leadership practices in schools are characterized by shared values, clear school development goals, leadership coherence, and evaluation of goal attainment. These four dimensions indicate that collaborative leadership practices extend beyond cooperation by promoting a shared vision, a common direction for school development, leadership consistency, and collective evaluation as the foundation for educational partnerships.

Ideally, collaborative leadership practices enable school principals to build synergy between schools and various stakeholders to support meaningful learning. Through collaborative leadership practices, principals can cultivate a participatory organizational culture, promote stakeholder engagement, and establish strategic educational partnerships focused on student development (Hargreaves & O'Connor, 2018). A collaborative school environment is believed to create favorable

conditions for the implementation of deep learning because all stakeholders share a collective commitment to providing meaningful learning experiences for students (Debnath, 2025).

Although numerous studies have emphasized the importance of educational partnerships in supporting learning quality, their implementation in many schools continues to face several challenges. A systematic review conducted by Mu et al. (2023) revealed that partnerships among schools, families, and higher education institutions remain constrained by limited coordination, unequal stakeholder participation, and unsustained collaboration. Furthermore, Epstein & Sheldon (2016) argued that partnership policies alone are insufficient without supportive school leadership and systematic program implementation. Likewise, Povey et al. (2016) found that parental involvement continues to face various barriers, including limited communication, low participation in school governance, and a lack of confidence in engaging with educational processes. Consequently, many resources that could potentially support learning have not been optimally integrated into school programs (Mu et al., 2023).

If these challenges persist, schools may struggle to provide learning environments that support the implementation of deep learning and respond to the demands of 21st-century education. Students may lose opportunities to engage in authentic learning experiences that enable them to connect academic content with real-life contexts. Teachers may also face limitations in developing innovative instructional practices due to insufficient support and collaboration from external stakeholders. Ultimately, the quality of learning may stagnate, limiting schools' ability to produce graduates equipped with competencies that meet the demands of contemporary society (Junindra et al., 2022).

Previous studies have consistently demonstrated that school leadership plays a crucial role in improving learning quality and fostering positive school culture. Robinson & Gray (2019) emphasized the importance of school leadership in creating conditions that support student learning outcomes, whereas Hargreaves & O'Connor (2018) identified collaborative professionalism as the foundation of sustainable professional learning. Other studies have also shown that stakeholder collaboration contributes to teacher professional learning and educational transformation (Day et al., 2016; Pitriani, 2024). Collectively, these findings indicate that collaborative leadership and stakeholder engagement are essential elements in supporting meaningful learning.

Nevertheless, research on school leadership, educational partnerships, and deep learning has generally examined these topics separately. Previous studies have focused on school leadership in improving student learning outcomes (Saxena & Chaturvedi, 2026), collaborative professionalism in fostering learning cultures (Zorde & Lapidot-Lefler, 2025), stakeholder collaboration in educational transformation (Höffken & Lazendic, 2024; Kyriopoulos, 2025), or the implementation of deep learning in classroom settings (Apriliyana, 2025). Although these studies have made significant contributions to the field of educational leadership, they have not comprehensively explained how principals enact collaborative leadership practices in educational partnerships to support deep learning implementation at the school level (Zajda, 2026). Therefore, this study seeks to provide a contextual empirical contribution by examining how collaborative leadership practices are enacted in educational partnerships to support deep learning implementation at SMAN 1 Muara Jawa.

Based on the foregoing discussion, this study aims to analyse the principal's collaborative leadership practices in educational partnerships to support deep learning implementation at SMAN 1 Muara Jawa, Kutai Kartanegara Regency, Indonesia. Accordingly, this study addresses two research questions: (1) How does the principal enact collaborative leadership practices in educational partnerships to support deep learning implementation at SMAN 1 Muara Jawa? and (2) What collaborative leadership strategies does the principal enact through educational partnerships to support deep learning implementation at SMAN 1 Muara Jawa? This study is expected to provide a contextual empirical contribution to the field of educational leadership by enhancing understanding of collaborative leadership practices in educational partnerships to support deep learning implementation within the context of SMAN 1 Muara Jawa. It is also expected to serve as a practical

reference for school principals in promoting collaboration with diverse educational stakeholders in support of meaningful learning.

METHOD

This study employed a qualitative descriptive approach (Creswell & Poth, 2016). This approach was selected because the study aimed to develop an in-depth understanding of the principal's collaborative leadership practices in building and managing educational partnerships to support the implementation of deep learning in a senior high school (Tisdell et al., 2025). A qualitative approach enabled the researchers to explore the processes, interactions, experiences, and meanings constructed by educational stakeholders within their natural setting, thereby providing a comprehensive description of collaborative leadership practices (Creswell & Poth, 2016).

The study was conducted at SMAN 1 Muara Jawa, Kutai Kartanegara Regency, East Kalimantan, Indonesia. Data were collected between March 1 and June 5, 2026. The research site was selected purposively because the school had established various educational partnerships with parents, the school committee, higher education institutions, business and industry, and government agencies to support the implementation of deep learning. These characteristics made SMAN 1 Muara Jawa an appropriate setting for examining the principal's collaborative leadership practices in building and managing educational partnerships. Participants were selected using purposive sampling based on their direct involvement in the planning, implementation, and evaluation of educational partnerships and the implementation of deep learning within the school (Tisdell et al., 2025). The selection criteria included individuals who played key roles in decision-making, partnership implementation, or the implementation of deep learning. Accordingly, the participants consisted of the principal (N1), the vice principal for curriculum (N2), the vice principal for student affairs (N3), and two teachers (N4 and N5), resulting in a total of five participants. Participant recruitment continued until data saturation was reached, that is, when additional interviews no longer generated new codes or themes relevant to the research objectives.

Data were collected through semi-structured interviews, observation, and document analysis. Prior to data collection, the researchers identified potential participants based on the inclusion criteria, contacted them, and obtained their consent to participate in the study. Five semi-structured interviews were conducted, with each interview lasting approximately 30–45 minutes. The interviews explored the principal's collaborative leadership practices in building and managing educational partnerships, including the development of the school's vision and strategies, human resource development, academic supervision, forms of collaboration established with stakeholders, and participants' perceptions of how these practices supported the implementation of deep learning. Observation was conducted from March 1 to March 3, 2026, to obtain contextual information regarding the implementation of collaborative leadership practices within the school. The observation focused on the school environment, facilities supporting professional learning, communication and dissemination media, academic supervision activities, and other school practices related to educational partnerships and the implementation of deep learning. The observational findings were used as contextual data and to complement the triangulation process with interview and documentary evidence.

Document analysis was conducted to verify and complement the interview data through the examination of six types of school documents: (1) the school's vision and mission document, (2) the School Work Plan (RKS), (3) the Partnership Program document, (4) the Academic Supervision Program, (5) meeting minutes, including those of Professional Learning Community (KOMBEL) meetings, vision formulation meetings, school committee meetings, and supervision follow-up meetings, and (6) documentation of activities related to teachers' professional development, internal and external collaboration, project-based learning, educational visits, and partnership activities. A total of six institutional documents were analysed, with one document representing each document category. These documents were used to corroborate the processes, activities, and mechanisms described by the participants during the interviews.

Data were analysed using the interactive analysis model proposed by Miles et al. (2014), which consists of data condensation, data display, and conclusion drawing and verification. All interview, observation, and documentary data were first transcribed and then analysed inductively using Atlas.ti 9 software. The coding process was conducted on sentences or paragraphs containing important information relevant to the research focus, derived from interview transcripts, observation field notes, and research documents. Data analysis involved open coding, grouping codes into categories (*code grouping*), and developing research themes. The initial coding was conducted by the first author using Atlas.ti 9 and documented to establish an audit trail, ensuring that the analytical process could be traced. Subsequently, the coding framework, code grouping, and thematic interpretations were reviewed and discussed iteratively by the co-authors until consensus was reached. The resulting themes were continuously verified through comparisons across interview, observation, and documentary data, including careful consideration of data that differed from or did not fully support the emerging patterns, until credible conclusions were reached.

To ensure the trustworthiness of the data, this study employed source triangulation, methodological triangulation, and *member checking*. Source triangulation was conducted by comparing information obtained from the principal, vice principals, teachers, observation findings, and relevant school documents. Methodological triangulation involved comparing data collected through interviews, observations, and document analysis (Schlunegger et al., 2024). In addition, *member checking* was conducted by asking participants to review and confirm the accuracy of the interview data and the researchers' interpretations (Kullman & Chudyk, 2025). These procedures were undertaken to enhance the credibility, dependability, confirmability, and transferability of the research findings.

RESULTS AND DISCUSSION

RESULTS

This section presents the findings derived from the analysis of interview, observation, and documentary data. The analysis indicates that the principal's collaborative leadership practices were manifested through human resource development, academic supervision, collaborative strategies, and the participatory formulation of the school's vision and strategic direction in building and managing educational partnerships. According to the participants' perspectives, these practices were perceived to support the implementation of deep learning within the school.

To enhance the traceability of the analytical process, Table 1 presents an example of the development of the research themes, beginning with raw data excerpts, followed by the open coding process, code grouping into categories, and the generation of the final research themes. These themes subsequently served as the basis for presenting the findings in the following sections.

Table 1. Example of Data Traceability from Raw Data to Research Themes

Raw Data (Participant Excerpt)	Open Coding	Category	Theme
"Our capacity-building strategy is to encourage teachers to participate in external professional development activities, such as the Teacher Learning Community (Kombel) and MGMP." (N2)	Support for professional development	Teacher development capacity	Human Resource Development
"The supervision process consists of three standard	Stages of supervision	Academic supervision implementation	Principal Supervision

<i>stages. The first is planning..." (N1)</i>							
<i>"We also have a peer evaluation program, where teachers assess one another's performance." (N1)</i>	Peer evaluation			Internal collaboration		Collaborative Strategies	
<i>"...the school's vision and mission are formulated collaboratively with all stakeholders." (N1)</i>	Participatory formulation	vision	Shared development	vision	Vision and Formulation	Strategy	
<i>"Teachers have become much more motivated to explore instructional approaches that are experiential and contextual." (N1)</i>	Perceived support for learning	support for	Support for learning implementation		Support for Deep Learning Through Collaborative Leadership		

Human Resource Development

The findings indicate that human resource development constitutes one of the collaborative leadership practices implemented by the principal in establishing and managing educational partnerships to support the implementation of deep learning. Based on the interview data, this practice was manifested through providing teachers with opportunities to participate in professional development activities outside the school, organizing training programs and workshops, and involving teachers in various forums for sharing best practices. Observation conducted on March 1, 2026, also identified several facilities that supported teachers' professional development, including a Professional Learning Community (KOMBEL) room, communication and dissemination media, and information regarding the implementation of professional development programs within the school environment.

One form of human resource development involved providing teachers with opportunities to participate in professional development activities outside the school. The participants explained that the principal encouraged teachers to engage in activities such as the Subject Teacher Consultation Forum (*Musyawah Guru Mata Pelajaran [MGMP]*), Professional Learning Community (KOMBEL) meetings, seminars, training programs, and other competency development activities. According to the participants, these activities provided opportunities for teachers to acquire new knowledge and professional experiences that could inform their classroom instruction. As stated by N2:

"Our capacity-building strategy is to encourage teachers to participate in external professional development activities, such as the Teacher Learning Community (Kombel) and the MGMP for subject teachers across Muara Jawa." (N2)

This statement was supported by Participant N4, who explained that the school provided teachers with considerable flexibility to participate in both face-to-face and online professional development activities:

"...The school strongly supports teachers in participating in external activities, such as offline and online training, the Teacher Learning Community (Kombel), and MGMP meetings, so that we can gain a wider range of references and new teaching methods." (N4).

In addition to encouraging participation in external professional development activities, the interview findings revealed that the school regularly organized training programs and workshops as part of its teacher capacity-building initiatives. According to the participants, these activities

provided opportunities for teachers to discuss instructional strategies, share classroom experiences, and reflect on instructional practices. As explained by N1: *"We encourage teachers to independently participate in training programs and workshops."* (N1). An examination of the SMAN 1 Muara Jawa School Work Plan (RKS) for the 2025/2026 Academic Year confirmed that the school regularly organized teacher professional development activities through training sessions and collaborative discussions involving teachers from different subject areas as part of its professional development program.

Furthermore, the findings indicate that human resource development was not limited to formal training activities but also involved the active engagement of teachers in forums for sharing best practices. The participants explained that the principal encouraged teachers to share instructional experiences, disseminate innovative teaching practices, and provide peer feedback through the Professional Learning Community (PLC). According to the participants, the PLC served as a forum for discussion, experience sharing, and reflection on instructional practices.

"Within the school, we already have the Teacher Learning Community (Kombel). It serves as a forum for sharing good practices to motivate other teachers and, of course, as a space for mutual reflection." (N1).

This finding was consistent with N4's explanation that the forum also functioned as a platform for sharing best practices and conducting peer evaluation. *"Its purpose is to share good practices and provide opportunities for peer evaluation."* (N4). These findings were corroborated by the minutes of the Professional Learning Community meetings for the 2025/2026 Academic Year, which documented that the forum was used to facilitate the sharing of best practices, instructional reflection, discussions of classroom challenges, and the development of follow-up actions aimed at improving teaching practices.

Overall, the findings indicate that human resource development at SMAN 1 Muara Jawa was implemented through three main approaches: providing teachers with opportunities to participate in external professional development activities, organizing school-based training programs and workshops, and facilitating the sharing of best practices through the Professional Learning Community (KOMBEL). Based on the participants' perspectives, these three practices constituted key components of the principal's collaborative leadership and were perceived as supporting the implementation of deep learning within the school.

Principal Supervision

The findings indicate that principal supervision constituted one of the collaborative leadership practices implemented within the school. According to the participants, this practice was perceived to support the implementation of deep learning within the school. Based on the interview data, the participants perceived supervision as a professional development process consisting of three stages: planning, classroom observation, and post-observation reflection. An examination of the Academic Supervision Program of SMAN 1 Muara Jawa for the 2025/2026 Academic Year confirmed that these three stages were systematically implemented as part of the school's teacher professional development mechanism.

The first stage of supervision is planning. During this stage, the principal and the school management team prepare the supervision instrument used as a guideline throughout the classroom observation process. According to the participants, the instrument provided a shared reference for classroom observation and clarified the aspects that would be emphasised during the supervision process. As stated by Participant N1: *"The supervision process consists of three standard stages. The first is planning, which includes preparing the supervision instrument."* (N1). An examination of the Academic Supervision Program of SMAN 1 Muara Jawa for the 2025/2026 Academic Year showed that the supervision process began with the preparation of supervision instruments aligned with teachers' instructional plans. The document confirmed that the planning stage was completed before classroom observations were conducted.

The second stage is classroom observation. Based on the interview findings, the principal or the supervision team directly observed classroom teaching and learning activities to obtain an overview of instructional practices. According to the participants, classroom observation was conducted as part of the school's scheduled supervision program. As stated by Participant N1: *"The next stage is implementation, where I or the supervision team conducts classroom observations."* (N1)

This finding was further supported by N2, who explained that the supervision process began with classroom observation, followed by adjustments to instructional planning and a joint reflection session. *"...It begins with classroom observation. After that, we, as teachers, revise our instructional plans to align them with the school's vision and mission. Then... it concludes with reflection."* (N2). Observation findings showed that classroom teaching was directly observed as part of the supervision process. According to the participants, the observation results were then discussed jointly by the supervisor and the teacher during the reflection stage.

Following the classroom observation, supervision proceeded to the reflection stage. According to the interview findings, reflection was conducted through discussions between the principal or supervisor and teachers regarding the instructional practices that had been observed. The participants explained that this stage provided an opportunity to discuss classroom observations and identify appropriate follow-up actions related to instructional practice. *"The third stage is the post-observation session, in which the learning process is reflected upon together with the supervisor."* (N1).

These findings were corroborated by the minutes of the supervision follow-up meetings for the 2025/2026 Academic Year, which documented that observation results were discussed collaboratively with teachers to provide feedback and formulate follow-up actions related to instructional practice. However, the findings also revealed challenges in implementing supervision. One participant explained that maintaining high-quality instructional practices after the supervision process had concluded remained difficult. *"...In fact, the greatest challenge is whether we can sustain those ideal teaching practices after the supervision process. That is the most difficult part."* (N5)

This statement suggests that, although supervision was implemented systematically, maintaining instructional practices following the supervision process was perceived by some participants as a continuing challenge. It also illustrates the variation in participants' experiences regarding the implementation of supervision. These findings were further corroborated through the Academic Supervision Program of SMAN 1 Muara Jawa for the 2025/2026 Academic Year and the minutes of supervision follow-up meetings, which confirmed that the supervision mechanism consistently comprised planning, classroom observation, and reflective discussion as integral components of teacher professional development. Overall, the findings indicate that principal supervision was implemented through three stages, namely planning, classroom observation, and reflection, as part of the principal's collaborative leadership practices. According to the participants, this supervision process was perceived to support teachers in implementing deep learning within the school.

Collaborative Strategies

The findings indicate that the principal implemented collaborative strategies as one of the leadership practices in building and managing educational partnerships within the school. Based on the data analysis, these strategies were manifested through two main forms: internal collaboration, involving members of the school community, and external collaboration, involving various stakeholders outside the school. According to the participants, both forms of collaboration were perceived to support the implementation of deep learning and were associated with communication, coordination, and the active involvement of multiple stakeholders in school programmes.

Internal Collaboration

Internal collaboration was manifested through the establishment of the Teacher Learning Community (Kombel), peer evaluation, communication among teachers, and interdisciplinary collaboration. These collaborative practices created opportunities for teachers to discuss, share experiences, reflect on their teaching practices, and provide feedback to one another. According to

the participants, these activities also facilitated communication, collaboration, and reflective discussion among teachers. One form of internal collaboration was implemented through the Teacher Learning Community (Kombel) and peer evaluation, which provided teachers with opportunities to share good practices and engage in collective reflection. As stated by Participant N1: *"We also have a peer evaluation program, where teachers assess one another's performance."* (N1)

This finding was supported by Participant N5, who explained that teacher collaboration was also fostered through communication and reflection on instructional practices. According to the participant, these activities provided opportunities for teachers to complement one another in delivering learning materials. *"As a science teacher, I personally emphasize communication among teachers so that we can complement one another in delivering learning materials and engage in peer reflection."* (N5). In addition to the Teacher Learning Community (Kombel), internal collaboration was also reflected in interdisciplinary teaching. According to the participants, teachers from different subject areas worked together in designing and implementing learning activities that integrated multiple disciplines. As explained by Participant N3:

"Classroom instruction often involves collaboration among teachers from related subject areas. For example, Biology teachers collaborate directly with Physics teachers to explain and calculate students' heart rate and lung capacity." (N3)

These findings were supported by the documentation of instructional activities for the 2025/2026 Academic Year, which demonstrated the implementation of teacher collaboration in classroom instruction and cross-disciplinary learning initiatives. Overall, the interview findings, supported by the minutes of Professional Learning Community (KOMBEL) meetings and the documentation of instructional activities, indicate that internal collaboration at SMAN 1 Muara Jawa was manifested through teacher communication, reflective practice, peer evaluation, and collaborative teaching. These practices constituted an integral component of the principal's collaborative leadership. According to the participants, these collaborative practices were perceived to support teachers in implementing deep learning within the school.

External Collaboration

The findings indicate that the principal fostered external collaboration by establishing partnerships with a wide range of stakeholders, including business and industry partners, higher education institutions, government agencies, the school committee, and parents. These partnerships were manifested through outreach programmes, educational visits, guest lecturer initiatives, communication forums, and other collaborative activities tailored to the school's needs and instructional objectives. The participants explained that the school collaborated with various external institutions by involving them in teaching and learning activities. These findings were supported by an examination of the Partnership Program Document of SMAN 1 Muara Jawa for the 2025/2026 Academic Year, which documented various forms of collaboration with business and industry partners, higher education institutions, government agencies, and other stakeholders as part of the school's educational programs. As described by N5:

"Regarding external partners, representatives from PT PLN (PLTU) once conducted a session on safety awareness and environmental management. The school also has Memoranda of Understanding (MoUs) with external organizations. If I'm not mistaken, the collaborations usually take the form of educational visits, outreach programs, or inviting guest teachers to teach in the classroom." (N5)

This finding was supported by Participant N1, who explained that the school also established partnerships with companies, universities, and other institutions through various programs that supported school activities.

"We also collaborate with many companies and universities. Most recently, we partnered with Pertamina on an outreach program about utilizing MBG waste for maggot cultivation. We also collaborate with the Vocational Training Center (BLKI)." (N1)

These findings were further corroborated by the documentation of partnership activities for the 2025/2026 Academic Year, which demonstrated the implementation of outreach programs, educational visits, and guest lecturer initiatives involving various external partners. In addition to establishing partnerships with external institutions, the school maintained continuous communication with parents and the school committee through regular discussion forums addressing students' development. As explained by N1: *"With parents, we regularly hold discussions and provide updates on their children's development through routine meetings with the school committee."* (N1). This statement was reinforced by Participant N5, who explained that communication with parents was also maintained by teachers as part of the instructional process. *"Internally, teachers actively communicate with parents regarding students' conditions and progress in the classroom."* (N5)

These findings were corroborated by the minutes of the School Committee meetings for the 2025/2026 Academic Year, which documented communication forums involving the school, the school committee, and parents to discuss students' development and the implementation of school programs. Overall, the interview findings, supported by the Partnership Program Document, the School Committee meeting minutes, and the documentation of partnership activities, indicate that external collaboration at SMAN 1 Muara Jawa was implemented through partnerships with diverse stakeholders. These partnerships constituted an integral component of the principal's collaborative leadership. According to the participants, they were perceived to support teachers in implementing deep learning within the school.

Vision and Strategy Formulation

The findings indicate that the principal formulated the school's vision and strategies through a process that involved multiple stakeholders. Based on the data analysis, this process consisted of two main stages: conducting an initial assessment as the basis for developing the school's vision, followed by the participatory formulation of the school's vision and strategies involving members of the school community and other stakeholders.

The first stage involved conducting an assessment of the school's current conditions to identify the needs, strengths, and challenges associated with the implementation of learning. The information obtained from this assessment served as the basis for determining the school's future direction. As explained by Participant N1: *"The first step is to conduct an initial assessment of the learning conditions in the school."* (N1)

Following the initial assessment, the school's vision was formulated through discussion forums involving various stakeholders. The principal invited teachers, educational staff, students, the school committee, and parents to provide input on the school's future direction. As stated by Participant N1: *"...the school's vision and mission are formulated collaboratively with all stakeholders."* (N1). This statement was supported by Participant N3, who explained that all stakeholders were given equal opportunities to express their views during the vision development process.

"In developing the vision, the school committee, teachers, student representatives, and all stakeholders have equal opportunities to express their aspirations. We ensure that students also have a voice in the process." (N3)

This finding was further reinforced by Participant N4, who explained that the vision formulation process was carried out through discussion groups involving representatives from various sectors of the school community.

"We formed discussion groups involving representatives of parents or the school committee, students, school management, teachers, and administrative staff. The outcomes of these group discussions then became the foundation for the school's vision and mission in supporting deep learning." (N4)

These findings were corroborated by an examination of the Vision and Mission Document of SMAN 1 Muara Jawa for the 2025/2026 Academic Year and the minutes of the vision formulation and school program planning meetings, which confirmed that the vision development process was conducted collaboratively through deliberative forums involving diverse stakeholders before being formally adopted as the foundation for implementing school programs. Overall, the findings indicate that vision and strategic planning at SMAN 1 Muara Jawa began with an assessment of the school's conditions and was subsequently followed by a participatory vision formulation process involving multiple stakeholders. This collaborative approach constituted an integral component of the principal's collaborative leadership. According to the participants, it was perceived to support the implementation of deep learning within the school.

Support for Deep Learning Through Collaborative Leadership

The findings indicate that the participants perceived the principal's collaborative leadership practices as supporting teachers in implementing deep learning within the school. Based on the interview findings, practices such as human resource development, academic supervision, collaborative strategies, and the participatory formulation of the school's vision and strategic direction were perceived by the participants to support teachers in implementing deep learning through collaborative, reflective, and contextual instructional approaches. These findings reflect the participants' perceptions of how the principal's collaborative leadership practices support the implementation of deep learning, rather than demonstrating a causal relationship or improvements in student learning outcomes.

Support for Teachers

The findings indicate that the participants perceived the principal's collaborative leadership practices as providing support for teachers in implementing classroom instruction. Based on the interview findings, practices such as collaboration, academic supervision, professional training, and educational partnerships were perceived to provide teachers with opportunities to develop their knowledge, reflect on their instructional practices, and enrich the teaching strategies they apply in the classroom. Participant N1 explained that the collaborative leadership practices implemented at the school were associated with changes in teachers' perspectives on the teaching and learning process.

"In terms of the teachers, there has been a shift in mindset... they have become more accustomed to being creative, reflective, and actively engaged... They are also much more motivated to explore instructional approaches that are experiential and contextual." (N1). This finding was further supported by N4, who explained that teachers' participation in various professional development activities provided opportunities to acquire new knowledge and instructional experiences.

"By participating in offline and online training, the Teacher Learning Community (Kombel), and external MGMP activities, we gain a wider range of references and new teaching methods." (N4)

These findings were corroborated by the Academic Supervision Program of SMAN 1 Muara Jawa for the 2025/2026 Academic Year, the minutes of the Professional Learning Community (PLC) meetings, and the documentation of teachers' professional development activities, which demonstrated that the school consistently facilitated academic supervision, instructional reflection, professional development programs, and forums for sharing best practices as part of teachers' capacity-building initiatives. Overall, based on the participants' perspectives and supported by documentary evidence, these collaborative leadership practices provided teachers with opportunities to participate in supervision, collaborative reflection, professional learning, and continuous professional development. According to the participants, these activities were perceived to support teachers in implementing deep learning within the school.

Support for Students

The participants perceived the principal's collaborative leadership practices as supporting teachers in implementing contextual learning activities that encouraged student participation. Based on the interview findings, various forms of educational partnerships, out-of-class learning activities,

project-based learning, and the involvement of external practitioners were perceived as providing students with more diverse learning experiences. Participant N1 perceived changes in students' participation during learning activities following the implementation of collaborative leadership practices.

"The impact of my leadership and the implementation of this culture... on students through deep learning activities is reflected in very significant changes in their willingness to ask questions, their ability to solve problems, and their increasingly critical way of thinking." (N1)

This view was supported by Participant N5, who explained that students showed enthusiasm when participating in learning activities conducted outside the classroom. *"The students responded very positively, especially during educational visit programs. The most noticeable change is that they have become more active and open."* (N5)

In addition, participant N3 explained that the partnerships established by the school provided opportunities for students to participate in field visits and project-based learning activities. *"Learning no longer has to take place exclusively in the classroom. Students have become accustomed to educational visits and completing project-based assignments."* (N3)

These findings were corroborated by the Partnership Program Document of SMAN 1 Muara Jawa for the 2025/2026 Academic Year and the documentation of school activities, which demonstrated the implementation of educational visits, project-based learning, collaborative activities with external partners, and the involvement of external practitioners in the instructional process as part of the school's educational programs. Overall, based on the participants' perspectives and supported by documentary evidence, the principal's collaborative leadership practices provided opportunities for students to participate in educational visits, project-based learning, and collaborative activities involving external partners. According to the participants, these activities were perceived to support student participation in the implementation of deep learning within the school.

DISCUSSION

Based on the findings, the principal's collaborative leadership practices at SMAN 1 Muara Jawa were manifested through human resource development, academic supervision, collaborative strategies, and the participatory formulation of the school's vision and strategic direction. According to the participants' perspectives, these practices supported the implementation of deep learning by strengthening educational partnerships, professional collaboration, and the involvement of various stakeholders in the implementation of school programs. This section interprets the findings by relating them to relevant theories and previous studies in order to explain how collaborative leadership practices were enacted within the context of the school under investigation. A conceptual visualization of the research findings is presented in Figure 1.

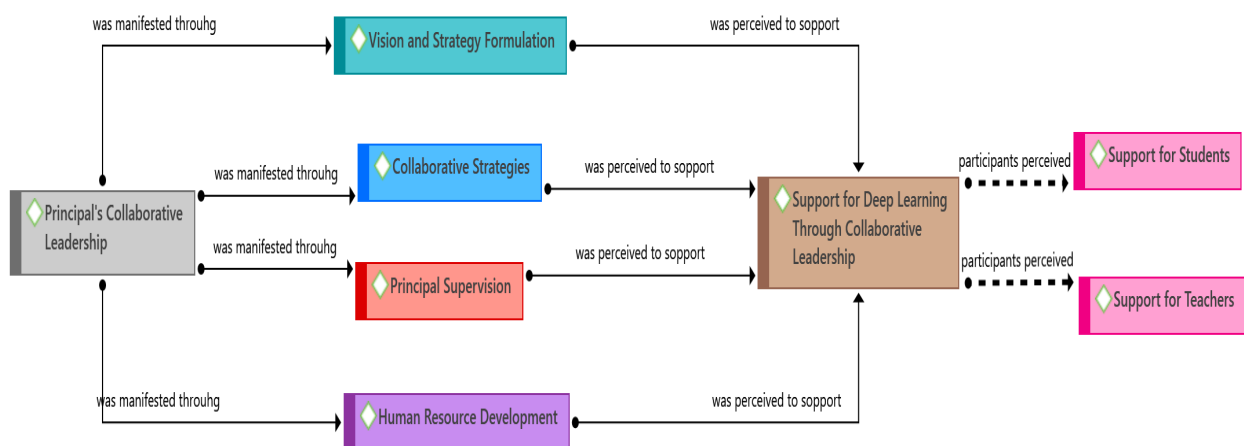


Figure 1. Conceptual Map of the Principal's Collaborative Leadership Practices Based on the Data Analysis

Human Resource Development as the Foundation of Collaborative Leadership

Human resource development emerged as one of the principal's collaborative leadership practices in supporting the implementation of deep learning within the school. This practice was reflected in providing teachers with opportunities to participate in the Subject Teacher Forum (MGMP), the Teacher Learning Community (Kombel), seminars, and training programs, while also encouraging them to share good practices through various collaborative forums. These findings indicate that teacher professional development is positioned as a continuous effort to strengthen teachers' professional capacity rather than merely fulfilling mandatory professional development requirements. Such practices also reflect the demands of twenty-first-century educational transformation, which emphasizes the importance of continuous professional learning for teachers (OECD, 2023).

From the perspective of Collaborative Professionalism, Hargreaves & O'Connor (2018) argue that school improvement is more effective when teachers cultivate a shared learning culture through collaboration, reflection, and the exchange of professional practices. The findings of this study suggest that such a culture was reflected in the integration of MGMP, Learning Communities, training programmes, seminars, and best-practice sharing forums that complemented one another. This interpretation supports the findings of Admiraal et al. (2021), who highlight the important role of Professional Learning Communities (PLCs) in promoting teachers' professional learning. However, several studies have argued that professional development initiatives do not necessarily lead to meaningful changes in classroom practice when they are implemented primarily as administrative requirements or are not accompanied by systematic reflection and follow-up activities (Geletu & Mihiretie, 2024; Ketsman et al., 2025). In the present study, the effectiveness of professional development appears to depend on the principal's ability to integrate these initiatives into the school's collaborative culture, thereby enabling professional learning to become an ongoing and sustainable process.

The findings further suggest that the principal's role was perceived as facilitating teachers' professional learning, consistent with the Leadership for Learning framework proposed by Hallinger (2010). Providing teachers with diverse professional learning opportunities not only broadens their knowledge but also creates spaces for discussion, reflection, and the collaborative development of instructional practices. These findings are consistent with those of Khalifa et al. (2021) and Juniar et al. (2024), while also suggesting that the success of professional development is likely influenced by the school's collaborative culture, teachers' commitment, and the principal's leadership support, rather than simply by the number of professional development activities offered.

These findings should be interpreted within the context of a school that has already established a collaborative culture through Learning Communities and strong principal leadership. Therefore, the results should not be generalized to suggest that organizing training programs or MGMP activities will automatically enhance teachers' professional development across all school settings. Theoretically, this study provides a contextual empirical illustration of the concept of Collaborative Professionalism by showing how teachers' professional development was supported through the integration of multiple collaborative learning activities facilitated by the school principal within the context of SMAN 1 Muara Jawa. Practically, the findings suggest that schools may consider establishing an integrated professional learning system that connects MGMP, Learning Communities, academic supervision, professional training, and best-practice sharing forums into a coherent and sustainable professional learning ecosystem.

Principal Supervision as a Mechanism for Improving Learning Quality

Supervision represents one of the collaborative leadership practices implemented by school principals through the stages of planning, classroom observation, and reflective dialogue with teachers. Rather than being perceived merely as an evaluative activity, supervision is viewed as a professional learning process that promotes dialogue, reflection, and constructive feedback to improve instructional practices. The findings suggest that supervision was perceived as an integral

component of professional learning that supported teachers in implementing deep learning, rather than simply serving as a mechanism for monitoring teacher performance.

This interpretation aligns with the Leadership for Learning framework proposed by Hallinger (2010), which identifies supervision and professional support as central responsibilities of school leaders in improving instructional quality. Similarly, Barokah et al. (2025) conceptualize academic supervision as a professional learning process characterized by reflective dialogue between supervisors and teachers. The findings of this study suggest that the collaborative value of supervision was reflected not only in classroom observation but also in providing teachers with opportunities to critically reflect on their instructional practices and receive constructive feedback to inform instructional improvement.

However, several studies have reported that academic supervision does not necessarily lead to sustained improvements in teaching practices when it is primarily oriented toward administrative compliance, lacks systematic follow-up, or is not supported by teachers' and school leaders' commitment to ongoing reflective practice (Lia & Gunadi, 2025; Prasetyo & Tsaqib Muhes, 2025). This perspective suggests that the effectiveness of supervision depends not only on the implementation of planning, observation, and reflection but also on the quality of post-supervision follow-up and the learning culture established within the school.

The findings also reveal that sustaining instructional improvements after supervision remains a significant challenge. This supports the argument of Itje et al. (2025), who emphasize that collaborative supervision requires continuous mentoring and follow-up, and is consistent with Istiqomah et al. (2026), who highlight the importance of post-supervision coaching in maintaining instructional improvement. Accordingly, this study provides a contextual empirical illustration of collaborative supervision by illustrating how participants perceived the effectiveness of supervision to depend not only on the quality of the supervision process itself but also on the consistency of follow-up actions that supported reflective practice.

These findings should be interpreted within the context of a school that has already established a culture of reflective practice, structured academic supervision, and strong leadership support for teachers' professional development. Therefore, the findings should not be generalized to suggest that collaborative supervision will produce similar outcomes across all school contexts. Theoretically, this study provides a contextual empirical illustration of the Leadership for Learning framework by illustrating how supervision was enacted as a professional learning process integrating classroom observation, reflective dialogue, and continuous follow-up within the context of one Indonesian public senior high school. Practically, the findings suggest that schools may consider ensuring that every supervision cycle is accompanied by structured reflection and systematic follow-up mechanisms so that feedback from supervision can inform subsequent instructional practice.

Collaborative Strategies for Strengthening Educational Partnerships

The findings suggest that collaborative leadership was reflected in the integration of internal and external collaborative practices that supported educational partnerships. These collaborative practices involved not only members of the school community but also various external partners who contributed to the implementation of learning. Internal collaboration was fostered through the Teacher Learning Community (Kombel), peer evaluation, and interdisciplinary teaching, whereas external collaboration was established through partnerships with higher education institutions, business and industry, government agencies, the school committee, and parents. These findings suggest that the implementation of deep learning was supported not only by the school's internal capacity but also by the active involvement of multiple stakeholders who contributed resources, expertise, and learning opportunities to the educational process.

This interpretation is consistent with Epstein (2018) Overlapping Spheres of Influence theory, which conceptualizes schools, families, and communities as complementary partners in supporting students' learning. In the present study, educational partnerships were reflected not only in school-parent communication but also in the active participation of external stakeholders in instructional

activities, such as guest teacher programmes, educational outreach initiatives, and educational visits. The findings also reinforce the argument of Bryk et al. (2015) that collaborative networks facilitate the exchange of knowledge, experience, and best practices that contribute to continuous instructional improvement.

However, several studies have argued that establishing educational partnerships does not necessarily lead to improved teaching and learning outcomes when collaboration is merely ceremonial, limited to short-term activities, or lacks shared goals and mutual responsibility among partners (Acierto, 2026; Bernay et al., 2020). This perspective suggests that the effectiveness of educational partnerships depends not simply on the number of stakeholders involved but on the quality of interactions, the continuity of collaboration, and the alignment of shared goals among participating partners.

In the context of this study, educational partnerships are embedded within school programs, allowing collaboration to move beyond coordination and become an integral component of the teaching and learning process. These findings provide a contextual empirical illustration of Debnath's (2025) discussion of teacher collaboration and participatory leadership by illustrating how collaborative leadership was also reflected in the principal's efforts to establish and sustain external partnerships that enriched learning. Nevertheless, these findings should be interpreted within the context of a school with well-established collaborative networks and strong stakeholder support, and therefore may not be directly transferable to schools with more limited partnership opportunities. Theoretically, this study provides a contextual empirical illustration of collaborative leadership by illustrating how complementary internal and external collaborative practices were integrated to support educational partnerships within the context of one Indonesian public senior high school. Practically, the findings suggest that school principals may consider cultivating sustainable partnerships that are explicitly aligned with instructional goals and actively engage diverse stakeholders as part of a comprehensive strategy for supporting teaching and learning.

Participatory Vision Formulation

The school vision was formulated through a participatory process involving teachers, administrative staff, students, the school committee, and parents. The findings suggest that vision formulation was practiced as an integral component of collaborative leadership by engaging multiple stakeholders in shaping the school's future direction. Such involvement suggests that the school vision was regarded not merely as an administrative document but as a collective agreement that serves as the foundation for implementing school programs.

This interpretation aligns with Leithwood et al. (2008), who argue that effective schools develop a shared vision to guide educational improvement. Similarly, Harris et al. (2022) emphasize, within the framework of distributed leadership, that stakeholder participation is a fundamental element of school decision-making. In the present study, the involvement of teachers, administrative staff, students, parents, and the school committee from the initial stage of vision formulation illustrates how collaborative leadership was enacted through dialogue aimed at building a shared understanding of the school's goals and strategic direction.

Conversely, several studies have suggested that participatory vision formulation does not necessarily result in effective implementation when stakeholder involvement is merely symbolic or when the vision is not embedded in the school's culture and everyday practices (Dewi et al., 2026; Doten-Snitker et al., 2021). This perspective indicates that the success of vision formulation depends not only on the breadth of stakeholder participation but also on the principal's ability to foster collective commitment so that the vision genuinely informs decision-making and guides school improvement initiatives.

The findings of this study provide a contextual empirical illustration of the work of Day et al. (2016) by illustrating how stakeholder participation was perceived to foster a sense of shared ownership over the school's future direction within the context of this school. The findings further illustrate how stakeholder participation was perceived to contribute to a sense of shared ownership

over the school's future direction throughout the vision implementation process within the context of this school. Nevertheless, these findings should be interpreted within the context of a school characterized by an established culture of dialogue and open communication, and therefore may not be directly transferable to schools with lower levels of stakeholder participation or more limited collaborative capacity. Theoretically, this study provides a contextual empirical illustration of distributed leadership by illustrating how participatory vision formulation was enacted through collaboration among multiple stakeholders within the context of one Indonesian public senior high school. Practically, the findings suggest that school principals may consider meaningfully engaging diverse stakeholders from the earliest stages of vision formulation to ensure that the school vision functions not simply as an institutional document but as a shared guide for educational practice and continuous school improvement.

Collaborative Leadership Support for Deep Learning Implementation

The implementation of collaborative leadership by the school principal was perceived to support the implementation of deep learning through human resource development, academic supervision, collaborative partnership strategies, and participatory vision formulation. According to the participants, these leadership practices provided teachers with opportunities to develop more reflective, collaborative, and contextualized instructional approaches while offering students richer and more diverse learning experiences. These findings suggest that support for deep learning was reflected in the integration of multiple leadership strategies that supported teachers' professional capacity, collaborative practices, and a supportive learning environment within the context of this school.

This interpretation aligns with Fullan et al. (2018) concept of Deep Learning, which identifies collaboration, reflection, and meaningful learning experiences as its defining characteristics. In the present study, collaborative leadership was enacted through the integration of teacher professional development, academic supervision, educational partnerships, and participatory vision formulation to support the implementation of deep learning. The findings also reinforce the argument of Robinson & Gray (2019) that school leaders influence teaching and learning indirectly by developing teachers' professional capacity and creating conditions that support effective learning.

Conversely, several studies have suggested that collaborative leadership does not necessarily lead to deep learning when collaborative efforts fail to transform classroom practice, are constrained by insufficient teacher capacity, or remain focused on administrative coordination rather than instructional improvement (Kielblock, 2025; Thomas et al., 2024). This perspective indicates that the relationship between collaborative leadership and deep learning is not linear but is shaped by the quality of collaborative implementation, teachers' commitment, and the principal's consistency in facilitating professional learning and sustained follow-up.

The findings of this study provide a contextual empirical illustration of the work of Junindra et al. (2022) by highlighting how collaborative leadership was perceived to support deep learning through the integration of human resource development, academic supervision, educational partnerships, and participatory vision formulation within the context of this school. Nevertheless, these findings should be interpreted within the context of SMA Negeri 1 Muara Jawa, where a strong collaborative culture and active stakeholder support have already been established. Consequently, the findings may not be directly transferable to schools operating under different organizational conditions. Theoretically, this study provides a contextual empirical illustration of collaborative leadership by highlighting how support for deep learning was reflected in the integration of multiple leadership practices within the context of one Indonesian public senior high school. Practically, the findings suggest that school principals may consider integrating teacher professional development, academic supervision, educational partnerships, and participatory vision formulation into a comprehensive and sustainable leadership strategy to support the implementation of deep learning.

CONCLUSIONS

The principal's collaborative leadership practices at SMAN 1 Muara Jawa were enacted through human resource development, academic supervision, collaborative partnership strategies, and participatory vision formulation. According to the participants' perspectives, these practices were perceived to support the implementation of deep learning by fostering professional collaboration, engaging multiple stakeholders, and creating opportunities for more reflective, collaborative, and contextualized learning. Rather than demonstrating causal effects or an established institutional culture, these findings provide a contextual empirical illustration of how collaborative leadership practices were perceived to support the implementation of deep learning through human resource development, academic supervision, educational partnerships, and participatory vision formulation within the context of the school.

This study is limited to a single-school qualitative descriptive design; therefore, the findings should be interpreted within the context of the school under investigation and should not be generalized to other educational settings. In addition, the findings are based on participants' perceptions and do not directly examine changes in classroom practices, evaluate the quality or sustainability of educational partnerships, or measure student learning outcomes. Future research is therefore encouraged to examine collaborative leadership across diverse school contexts using mixed-methods or quantitative approaches and to investigate how partnership quality, instructional practices, and student learning outcomes are associated with the implementation of collaborative leadership and deep learning.

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AUTHOR CONTRIBUTION STATEMENT

HS: Conceptualization, methodology, supervision, investigation, project administration, and manuscript review. PW: Data collection, formal analysis, validation, writing—original draft preparation, and visualization. DH: Literature review, data interpretation, manuscript editing, language review, and reference management. All authors have read and approved the final version of the manuscript.

AI DISCLOSURE STATEMENT

The authors used ChatGPT to assist with language translation, grammar refinement, and manuscript editing. All AI-assisted outputs were carefully reviewed, verified, and substantially revised by the authors. The authors take full responsibility for the originality, accuracy, interpretation, and integrity of the content presented in this manuscript.

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