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Exploring supervision in Montessori early childhood education: teacher needs and challenges

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ABSTRACT

The quality of Montessori early childhood education (ECE) depends on the professional competence of teachers and the presence of sustained supervisory support. However, supervision practices adapted for Montessori settings are still under-researched, particularly in Indonesia. This study examines the implementation of supervision in Montessori kindergartens and identifies the needs and challenges faced by teachers in improving their instructional practice. The research used a qualitative method. The research was conducted in three kindergartens in Malang, East Java by conducting semi-structured interviews with three principals and six early childhood teachers. The results show that the current supervision is more focused on administrative compliance and uses general government instruments, which do not sufficiently incorporate Montessori principles. Teachers stressed the importance of positive, practice-based supervision, especially in the setting of instructional support in language and mathematics. The main problems are the lack of professional training, the absence of specific supervision instruments for Montessori and inconsistent follow-up. The study shows that context-sensitive, observational supervision can improve teachers' pedagogical practices and align classroom implementation more closely with the philosophy of Montessori. The findings contribute to context-specific empirical evidence for the development of supervision models and instruments in Montessori ECE in Indonesia and similar educational contexts.

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1. INTRODUCTION

Early childhood education (ECE) is crucial in building children's cognitive, social, and emotional skills, setting the stage for lifelong learning and school success [1]–[3]. The first years of life, sometimes called the "golden age," are critical for brain development. By the age of eight, about 80% of brain growth has taken place. The brain is strongly myelinated, allowing for higher-level reasoning and faster performance on tasks [4]. Coinciding with major milestones in motor and language development, this process plays a crucial role in cognitive outcomes, supporting the concept that early sensitive experiences have long-lasting effects on child neurodevelopment [5]. This is a time when children need stimulation across many developmental areas to build a strong foundation for future learning and personal growth [6], [7]. ECE facilitates the development of children's social, emotional, cognitive, language, artistic, and physical motor skills in a supportive environment that offers appropriate stimulation. The learning experiences gained during this period form the basis for how children will engage in and approach learning in later stages of their education [8].

Teacher competence, including pedagogical, professional, social, and personal competences, directly affects the quality of learning experiences and children's developmental outcomes [9]. Teachers are central to guiding learning processes and supporting children's holistic development through responsive interactions and appropriate instructional practices within ECE [10]. Professional supervision has been identified as a key mechanism for improving teacher quality, instructional practices, and overall educational outcomes [11]. Effective supervision is strongly tied to leadership practices and professional support systems in schools. Previous studies have indicated that distributed leadership is important in managing complex educational settings and improving instructional practices [12]. Educational leadership is the actions (administrative and instructional) of a person who intentionally plans to influence the key processes in the school and thus the students' performance [13]. Furthermore, mentoring has been recognized as an essential approach to facilitate teachers' professional development by providing guidance, feedback, and chances for ongoing learning [14]. Existing structures have yet to support these aims fully, but prior research suggests that improving teacher quality in Indonesia requires sustained professional development supported by coherent systemic mechanisms, including effective supervision [15]. Effective school management practices also affect educational quality.

Montessori education, widely used in Indonesian ECE, focuses on individualized observation, prepared environments, and child autonomy [16]. However, many institutions that carry the Montessori label do not fully adhere to these principles, and supervision according to the Montessori pedagogy has not been well researched [17], [18]. The research has shown that Montessori education, when properly implemented, works to foster several aspects of early childhood development [19].

Despite the increasing use of Montessori education in early childhood settings, supervision practices specifically aligned with Montessori pedagogy are limited in the literature. Most educational supervision frameworks are developed based on general instructional standards and normally highlight administrative compliance and traditional classroom management practices. However, these methods may not adequately reflect the unique characteristics of Montessori education (prepared environments, individualized learning trajectories, observation-based teaching, and the teacher as facilitator). There have been many studies about educational supervision and teacher professional development in general, but little research has focused on how supervision is implemented in Montessori ECE contexts, as well as teachers' self-formation needs and challenges according to their own perceptions. As such, they call for supervision approaches grounded in context—that more accurately reflect Montessori pedagogies and classroom practices.

This study seeks to fill this gap by focusing on the supervision practices of Montessori-based ECE with an emphasis on teachers' needs and challenges. It intends to answer the following research questions: i) What does Montessori ECE do with oversight?; ii) What supervisory support do Montessori teachers need to implement the Montessori method effectively?; and iii) What are the challenges that teachers face in the implementation of Montessori-aligned supervision? The findings are anticipated to guide the refinement of a structured supervision model consistent with Montessori principles to improve teacher efficacy in ECE settings. The study therefore seeks to explore supervisory practices, teacher needs, and challenges in Montessori ECE settings.

What is unique about this study is its focus on supervision practices in Montessori ECE. Compared to previous research on general supervision models, this study explores supervision through the lens of Montessori pedagogical features, teacher needs, and components that hinder implementation. The results are anticipated to provide data regarding how supervision can be conditioned and guided using contextual and acting reflection to foster professional development that informs improved practices among Montessori teachers.

The study is exploratory rather than aimed at developing or validating a formal model of supervision. Instead, it seeks to develop a deep empirical understanding of how supervision is currently carried out and the needs and challenges teachers in Montessori classrooms face. The conceptual model described in this study stems from field-based findings and is intended to illustrate the relationships between key themes, not to present a tested or generalizable framework. It is hoped that these findings will provide a basis for future research in the development of Montessori-based supervision.

2. METHOD

2.1. Research design

A qualitative, multi-site case study design was used to explore the supervision and training practices of Montessori educators in ECE settings. The case study approach enables researchers to explore contemporary educational phenomena in their real-life context, especially when the boundaries between the phenomenon and its context are not clear-cut. The study was conducted according to the standards for reporting qualitative research (SRQR) to ensure transparency and rigor throughout the study.

This study was carried out in three different types of Montessori-based kindergartens, located in Malang, East Java, Indonesia. This design allowed for an in-depth understanding of educators' experiences, perceptions, and contextual practices around professional development and supervision while also capturing variance between Montessori classroom contexts. This methodological approach is in accordance with the traditions of qualitative research, who emphasize the importance of case study research as a means to explore complex educational practices in their natural settings [20], [21].

2.2. Participants and data collection

The research subjects were nine participants from three kindergartens using the Montessori method in Malang, Indonesia, consisting of 3 principals and 6 teachers. Three of the participants were principals, three were kindergarten to grade 1 (K-1) teachers, and three were teachers who taught kindergarten to grade 2 (K-2) from three Montessori-based kindergartens in Malang, East Java, Indonesia. Three schools are sufficient to represent variation because they are unique. In Indonesian ECE, K-1 is kindergarten A (children aged 4-5 years), and K-2 is kindergarten B (children aged 5-6 years).

Participants were selected using purposive sampling [22] with criteria including experience in implementing Montessori methods and participation in internal supervision or training programs. The participants were selected purposively based on three criteria: i) a minimum of two years of Montessori teaching experience; ii) active involvement in supervision or professional development; and iii) a willingness to participate in the study. Three kindergartens were also purposively selected to reflect variation in curriculum integration, institutional governance and community characteristics.

RA SB kindergarten is a religious school under the Ministry of Religious Affairs that integrates Montessori materials and methods with Islamic values. LB kindergarten is a private school accredited by the Department of Education. The kindergarten serves families of the middle to upper-middle class and combines the national curriculum with Montessori teaching practices. The Department of Education also oversees My Little Island (MLI) kindergarten, which reflects a more international context with Montessori pedagogy in a bilingual learning environment and more globally exposed families. Through these variations, the study was able to vary supervision practices across governance systems, socio-cultural contexts and levels of curriculum adaptation. As principals as well as teachers were also included, leadership and classroom practitioner views could be accessed, once again strengthening the credibility of findings through participant triangulation.

Although the number of institutions was limited, qualitative multisite case study research focuses on depth of contextual understanding, not statistical representation. Thus, it was considered that three schools with different characteristics would be sufficient to tap meaningful variation in supervision practices and to allow detailed analysis within each case. Data collection took place at the three sites until recurring patterns and themes relating to supervision practices among participants were identified repeatedly. The three schools involved are diverse, so there may be other variations in other Montessori contexts. Therefore, the findings are presented as an exploratory understanding of supervision practice, rather than a statement of complete thematic saturation.

Table 1 summarizes the characteristics of the participants included in this study. To protect participants' confidentiality, pseudonymous codes were used throughout the manuscript. All participants met the purposive sampling criteria, including a minimum of two years of experience implementing Montessori pedagogy and active involvement in school supervision or professional development activities.

Three complementary sources of data were collected to construct a rich description of supervisory practices in Montessori ECE: i) semi-structured interviews; ii) classroom observations; and iii) document analysis. For both the qualitative and quantitative data analyses, semi-structured interviews were conducted with all nine participants (three principals and six teachers) regarding their experiences, challenges associated with supervision and teacher development, as well as their professional needs.

Table 1. Characteristics of the participants

Participant code	Role	School	Teaching level	Montessori experience
P-MLI	Principal	MLI Kindergarten	-	>2 years
T-MLI 1	Teacher	MLI Kindergarten	K-1	>2 years
T-MLI 2	Teacher	MLI Kindergarten	K-2	>2 years
P-LB	Principal	LB Kindergarten	-	>2 years
T-LB 1	Teacher	LB Kindergarten	K-1	>2 years
T-LB 2	Teacher	LB Kindergarten	K-2	>2 years
P-SB	Principal	RA SB Kindergarten	-	>2 years
T-SB 1	Teacher	RA SB Kindergarten	K-1	>2 years
T-SB 2	Teacher	RA SB Kindergarten	K-2	>2 years

The interviews lasted between 25-60 minutes, were conducted in Bahasa Indonesia, and were recorded (with the participants' consent) before being transcribed verbatim. As the manuscript is written in English, selected quotations from the interviews were translated from Bahasa Indonesia into English as closely as possible to the original meaning by the researchers. We observed classroom activities in each participating school to document supervision, lesson implementation, the physical environment of classrooms, and child-adult interactions during routine Montessori learning.

Document analyses consisted of supervision instruments, supervision reports, teacher evaluation forms, professional development records, and other school documents on supervisory practices and Montessori implementation [21]. Interviews, observations, and document analysis allowed for methodological triangulation and offered a more holistic description of supervisory practice across the three research sites. The interview protocol focused on several dimensions relevant to supervision practices in Montessori ECE settings. These dimensions included teachers' experiences of existing supervision practices, challenges of implementing Montessori pedagogy, perceptions of supervision instruments, professional support needs, and challenges and expectations of Montessori-aligned supervision. The protocol examined the principals' views on the implementation of supervision and teacher development in Montessori classrooms.

The interview and observation instruments were developed based on the relevant literature on Montessori pedagogy and education supervision. Content validity was established through expert review of the instruments by ECE and supervision specialists. Revisions were made based on their feedback before the data collection process. The interview was piloted with an individual Montessori teacher who had no part in the main study to check the clarity and relevance of the interview questions. The researchers discussed observation indicators before the data collection to enhance the reliability of observations. At the start of the study, joint observation sessions were performed to foster a common understanding and consistent interpretation of the observation criteria.

2.3. Data analysis

Data were analyzed using thematic analysis [23] through an inductive coding process to identify patterns emerging from the data. Interview transcripts, observation notes, and documents were analyzed in three stages. First, open coding was done to extract meaningful units and initial concepts from interviews, observations, and documents. Second, axial coding was utilized to group similar codes into categories and subcategories by identifying relationships between emergent concepts. Third, selective coding was used to develop these categories into the main themes describing the experiences of supervision of Montessori teachers, the challenges they face, and supervisory practices, teacher needs, and teacher challenges in Montessori early childhood classrooms [24], [25].

The coding process was documented by linking initial codes, categories, and final themes to raw data samples to enhance analytical transparency. For example, in the open coding phase, the statement "A checklist is not helpful without feedback; we need discussions that mirror Montessori approaches" was coded as "limited feedback" and "lack of reflective dialogue". Based on similarities in participants' answers, these codes were then categorized during axial coding under the heading "reflective supervision limitations". This category was included in the larger topic of "supervisory difficulties" during the selective coding stage, therefore highlighting how the lack of feedback mechanisms inhibits the efficacy of supervision. This is an illustration of how raw data were methodically evaluated and raised into more abstract subjects. The researchers were able to create interpretations by always comparing data, codes, and initial themes, which interacted continuously. Thus, the iterative approach enabled the ultimate themes to be developed from the experiences of the participants rather than from hypotheses. To enhance the rigor of the analysis, the researchers independently coded the interview transcripts and compared the results. Discussions were held on coding disagreements until consensus was reached. Data from interviews, observations, and documents were continuously compared during the analysis to ensure data triangulation and enhance the credibility of the findings.

The coding process was iterative, with the data read repeatedly and emerging themes further refined. The data collection and analysis process were iterative throughout the study to identify recurring themes and shared experiences regarding supervision practices, teacher needs, and teacher challenges in the three schools involved in the study. The final coding framework generated through this process is provided.

2.4. Trustworthiness

The trustworthiness criteria of credibility, dependability, confirmability, and transferability were used to ensure the validity and reliability of this qualitative study. These criteria are widely accepted as appropriate standards for establishing rigor in qualitative research [26], [27]. Data triangulation (semi-structured interviews, document analysis, classroom observations) was used to establish credibility. Implementation of these strategies increased confidence that the findings truly reflected participants' experiences. Dependability was achieved through a systematic, consistent research process with

documentation of data collection and wider analysis. The research team performed peer debriefing by discussing analytical decisions made and reducing the potential for researcher bias. Confirmability was addressed by keeping an audit trail and reflective notes throughout the research process to ensure that the findings were grounded in empirical data rather than the researchers' personal assumptions. Finally, thorough, contextualized accounts of participants, institutional surroundings, and supervisory policies helped to enable transferability, enabling readers to evaluate how relevant the results were to other ECE settings.

3. RESULTS

Three primary themes came from thematic analysis: supervisory techniques, teacher requirements, and difficulties. By means of an iterative coding procedure and comparative analysis of data gathered from documents, observations, and interviews, these themes were created. To enhance data triangulation, each topic is shown by combining classroom observations, document analysis, and interview evidence from teachers and principals. The coding structure shown in Table 2 illustrates how raw data were organized into subthemes and broad themes.

Table 2 summarizes the coding framework derived from the thematic analysis. Three overarching themes emerged across the three participating schools: supervisory practices, teacher needs, and teacher challenges. These themes were consistently identified through the integration of interview, observation, and document data. The subsections present each theme with supporting evidence from the different data sources.

Teachers at the same time said they often needed more contextualized and Montessori-specific supervision, including feedback based on observations and subject-specific guidance in areas like language and mathematics. These demands reflect teachers' desire for supervision that promotes critical thinking rather than merely fulfilling administrative needs. Furthermore, several continuing difficulties were found, particularly about language teaching and adherence to Montessori principles. These difficulties highlight the conflict between organized pedagogical sequences demanded in Montessori education and outside pressures on learning (home literacy activities). Together, these findings point to the need for more contextually grounded and reflective supervisory techniques, as current supervisory techniques are not yet fully aligned with the pedagogical needs of Montessori classrooms.

Table 2. Coding framework of supervisory practices in Montessori-based kindergartens

Theme	Subtheme	Example code/category	Frequency	Representative quote
Supervisory practices (SP)	Generic instruments	Use of Department/Ministry templates	3 of 9	"*The instrument we use comes from the Department of Education, but it does not touch on Montessori-specific aspects.*" (P-LB-16June2025)
	Limited reflective supervision	Completion of form administrative assessment: minimal dialogue.	4 of 9	"*You need feedback to be useful. We need conversations around Montessori practices.*" (T-MLI1-31 July 2025)
	Lack of reflective feedback	Supervision not adapted to Montessori pedagogy; generic indicators	5 of 9	"*Supervision still follows general early childhood standards, not specifically Montessori.*" (P-SB-16June2025)
Teacher needs (TN)	Montessori-specific tools	Demand for subject-specific support (language, math)	8 of 9	"*If we had an instrument for Montessori, especially in mathematics and language, it would be beneficial.*" (P-MLI-16June2025)
	Observation-based feedback	Preference for reflection via dialogue	6 of 9	"*We prefer supervision through observation, because the feedback can serve as self-reflection.*" (T-SB1-06Aug2025)
	Professional mentoring support	Need for pedagogical guidance and mentoring support	7 of 9	"*Montessori lessons need to be done right, and teachers need guidance on how to do that.*" (T-LB1-04August2025)
Challenges (C)	Language instruction issues	Home-school mismatch (ABC vs phonics)	7 of 9	"*The most difficult area is Language, because at home children are used to A B C, while in Montessori we use phonics.*" (T-SB-20Jun2025)
	Fidelity of the Montessori lesson	Errors in applying the three-period lesson	6 of 9	"*Sometimes teachers reverse the order and begin with recalling before naming. That is not true.*" (P-LB-04August2025)

3.1. Theme 1: supervisory practices

Supervision was carried out regularly in all three schools, and teachers said it usually took place twice a semester. The tools used were generic templates from the Department of Education or the Ministry of Religious Affairs and not specifically designed for Montessori classrooms. Teachers explained that although supervision was conducted regularly, it focused primarily on completing administrative requirements rather than providing reflective feedback on Montessori teaching practices. Some principals said:

> "*We use an instrument from the Department of Education, but it doesn't cover the Montessori-specific things. Our teachers need more specific guidance that is aligned to Montessori principles*." (Principal LB, Interview, 16 June 2025)
> "*We are using the instrument from the Ministry of Religious Affairs, but we would want to adopt a supervisory instrument based on Montessori because the approach is different and would suit our teacher better*." (Principal SB, Interview, 16 June 2025)

Observations of the classroom confirmed these interview results. Principals gave comments following the observation during supervision meetings by evaluating classroom teaching using the current supervision tools. The current supervision tools, however, concentrated mostly on broad teaching techniques with comparatively little emphasis on the pedagogical elements unique to Montessori education, such as lesson presentation, the prepared environment, and the utilization of Montessori learning materials. Analysis of documents further supported these results. The examined supervisory tools were mostly comprised of general indicators of teacher performance and were modified from government-issued templates. The documents did not include explicit criteria for evaluating key Montessori pedagogical practices, requiring principals to record Montessori-specific observations separately when providing feedback. Furthermore, regularly held but not methodically related to supervisory results were professional development events, including workshops and internet training. Together, interviews, classroom observations, and document analysis suggest that supervision in the schools surveyed operated mostly as an administrative responsibility process instead of as a way to promote teachers' professional development inside the Montessori framework.

3.2. Theme 2: teacher needs

Teachers and principals consistently expressed the need for supervision instruments that are better aligned with Montessori pedagogy, particularly in complex and resource-intensive areas such as language and mathematics. They underlined that good supervision must not only evaluate teacher performance, but also be a source of encouragement, professional guidance, and opportunities for reflective dialogue to foster continuous improvement.

One school leader said:

> "*It would be great if we had an instrument specific to Montessori, especially in math and language. These two fields have many materials and special methods*." (MLI Principal, Interview, 16 June 2025)

Teachers also echoed similar views, highlighting that generic supervision checklists were insufficient without meaningful feedback. One teacher explained:

> "*A checklist is not useful without feedback, because we do not know what to improve. Teachers like direct observation, then discussion as feedback. If there is an elaborate instrument that can be used as a guide, that will be very helpful*." (Teacher MLI, Interview, 31 July 2025)

Another teacher highlighted the importance of observation-based supervision as a form of professional reflection.

> "*We prefer supervision by observation, because the feedback can be used as self-reflection to improve ourselves, as long as it not shared with others outside of peers*." (Teacher SB, Interview, 6 August 2025)

Classroom observations corroborated these findings. During the supervision sessions, principals observed teachers' classroom observation practices and gave feedback after the observation process. However, the existing supervision instruments offered little space for describing Montessori specifics of teaching. Principals had to add additional notes to the instruments to cover specific aspects of Montessori implementation, particularly those related to language and mathematics activities.

Document analysis also reinforced the perceptions. The documents reviewed on teacher supervision were primarily general indicators of teacher performance. They did not specifically include criteria related to Montessori-specific instructional practices, observation-based mentoring, or subject-specific guidance in language and mathematics. The restriction required supervisors to provide extra explanations or notes when documenting teachers' Montessori classroom practices.

The evidence from the interviews, classroom observations, and document analysis suggests that teachers expected supervision to be a professional learning process, not just an administrative evaluation. The results indicate that a supervision tool, aligned with the Montessori approach and including observation-

based feedback and reflective mentoring, would better meet the professional needs of teachers in the participating schools.

Principals and teachers had comparable concerns about the limitations of existing supervision, but highlighted different priorities. The principals mainly focused on supervision tools that better reflected Montessori pedagogy and helped to implement it in the institutions. Instead, teachers stressed observation-based feedback, reflective dialogue, and ongoing mentoring to improve their classroom practices. These complementary perspectives suggest that effective Montessori supervision should attend to both institutional accountability and teachers' continuous professional learning.

3.3. Theme 3: challenges

The teachers mentioned that applying Montessori principles, especially in language, was very difficult. Teachers and principals consistently identified challenges related to implementing Montessori language instruction, and these challenges were supported by evidence from interviews, classroom observations, and document analysis. The children found it hard to get used to phonetic sounds such as "A, beh, ceh" rather than the traditional way of learning the alphabet, which is "A, B, C."

One teacher explained:

> *"The hardest part is language, because children at home are used to A B C, and in Montessori we use phonics. Kids should be able to read by the end of kindergarten to grade 2*." (Teacher SB, Interview, 6 August 2025)

Another teacher elaborated on the difficulties of integrating and teaching grammar. In language, we sometimes spend a full month. Children are used to saying A B C, but we teach phonics sounds. By kindergarten to K-2, they must know grammar, but we also teach word blending, like "black" to "bl" and "ack" read "bl-aack.' Mistakes were also observed in the implementation of the three-period Montessori lesson. The interview results suggest that variations in children's home literacy experiences and Montessori phonics teaching frequently lead to requiring more instructional time before teachers can move on to more sophisticated language activities.

Errors were also observed in the use of the Montessori three-period lesson. For example, in language, with the letter O, the teacher should take the three steps: naming 'This is O. recognition 'Can you trace O?', then recall 'Can you find O?', said one principal. Sometimes teachers switch the order and start with naming, then recall. Another principal explained that teachers would sometimes offer immediate correction when children made mistakes when doing classroom activities. But Montessori pedagogy teaches teachers to let children finish their work on their own before stepping in to help. Sometimes, when children make mistakes, teachers correct them immediately. Montessori says that the teacher should let the child finish his work before intervening.

The document analysis further supported these findings. There had not always been systematic and continuous training, and supervisors' reports were not always in accordance with Montessori pedagogical principles. The instruments examined for supervision mainly included general indicators of teacher performance and included relatively few criteria specific to the Montessori pedagogy. Principals often added written notes to the existing supervision forms to document Montessori-specific classroom practices that were not well represented in the supervision instruments.

Classroom observations confirmed these findings. Professional development activities were conducted at the beginning of each semester. However, teachers still struggled to deliver the Montessori lesson sequences consistently, particularly in language instruction. All three schools faced similar challenges despite differences in institutional contexts. Most teachers reported problems at the classroom level of instruction; principals reported more often the need for more structured pedagogical supervision to improve teachers' practice of Montessori pedagogy. Results of classroom observations and document analysis generally supported both perspectives: these challenges were not only indicative of the complexity of Montessori pedagogy, but also of the limited alignment between existing supervision practices and Montessori instructional requirements.

Overall, the evidence from interviews, classroom observations and document analysis suggest that the challenges identified in the participating schools were strongly associated with the complexity of implementing Montessori pedagogy and the need for supervision that provides structured classroom observation, reflective dialogue and ongoing pedagogical support based on Montessori principles. Results also indicate that teachers consistently expressed a strong need for supervision tools and observation-based feedback specific to the Montessori approach and aligned with instructional sequences, especially to support the implementation of Language and Mathematics activities. These ongoing needs and implementation challenges laid the groundwork for the development of the field-based conceptual model.

While all three schools that participated had a shared commitment to Montessori pedagogy, each school differed in institutional contexts and curriculum implementation. MLI Kindergarten integrated Montessori and the Cambridge International Curriculum in a multilingual learning environment. In contrast, LB Kindergarten combined Montessori with the Letterland approach while emphasizing school readiness, independence, and motor development. In contrast, RA SB Kindergarten integrated Montessori pedagogy with Islamic education under the Ministry of Religious Affairs. Despite these contextual differences, the thematic analysis findings show that the supervisory issues were very similar across the three schools. Principals and teachers reported consistent use of generic supervision instruments, lack of reflective feedback opportunities, and a need for Montessori-specific supervision practices. The findings were recurring, suggesting that the supervisory challenges noted were common to the different Montessori settings, but were specific to the schools in the sample.

3.4. Field-based conceptual model of Montessori-aligned supervision

Based on the thematic analysis, a conceptual model was developed to synthesize the relationships among supervisory practices, teacher needs and teacher challenges, as shown in Figure 1. The model was developed based on interviews, classroom observations, and document analysis from the three participating Montessori-based kindergartens and provides a context-specific conceptual interpretation rather than a causal or predictive framework. The model illustrates those existing supervisory practices, characterized by general supervision instruments and limited reflective feedback, were associated with teachers' professional needs, particularly for Montessori-specific supervision instruments, observation-based feedback, and reflective pedagogical guidance. It also incorporates the implementation challenges identified across the participating schools, including difficulties in Montessori language instruction, fidelity to the three-period lesson, and continuous pedagogical support.

Taken together, these three interconnected themes provide a field-based conceptual foundation for the future development of Montessori-based supervision instruments that are more closely aligned with Montessori pedagogical principles and teachers' professional needs. The model should be interpreted as a context-specific conceptual model that emerged from this qualitative multi-site case study and not as a validated or causal model demonstrating the effectiveness of a certain supervision approach.

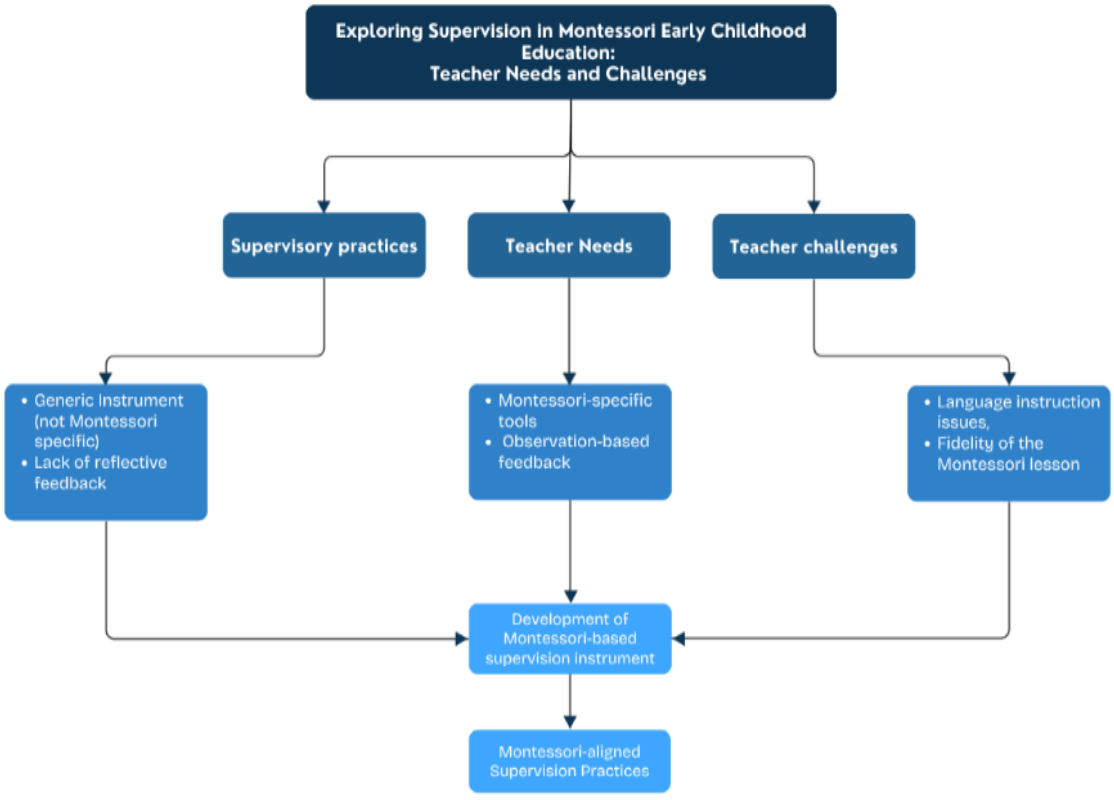


Figure 1. Supervision in Montessori ECE: teacher needs and challenges

4. DISCUSSION

4.1. Supervisory practices and the gap with Montessori philosophy

The results show that supervision in the studied Montessori-based kindergartens was carried out regularly, usually twice per semester. The tools used, however, were generic templates from the Department of Education or the Ministry of Religious Affairs, not designed for Montessori classrooms. The principals reported that these tools lacked any Montessori-specific indicators and focused solely on following the rules. Consequently, supervision was often a formality rather than a developmental process. This indicates that supervision in these contexts has not yet developed into a developmental and reflective practice, but is still largely compliance-oriented. Such a condition indicates a disconnect between modern supervision theories and actual practices in Montessori classrooms.

This finding is consistent with previous research suggesting that Montessori implementation often encounters challenges when educational systems rely on standardized procedures that do not fully reflect Montessori pedagogy [28]. Montessori education places considerable emphasis on the prepared environment, careful observation, individualized instruction, and fidelity to core pedagogical principles [16]. Therefore, supervision that relies solely on generic administrative instruments may provide limited opportunities to examine these essential dimensions of Montessori practice. Rather than indicating a weakness of supervision itself, the findings suggest that the supervisory instruments used in the participating schools were not sufficiently aligned with the specific characteristics of Montessori education.

Glickman's developmental supervision theory provides an appropriate framework for interpreting these findings [11], [29]. According to this perspective, supervision should function not only as technical monitoring but also as a process of professional assistance, reflective dialogue, collaborative problem-solving, and continuous teacher development. Similarly, several researchers [12], [14] argue that contemporary instructional supervision increasingly emphasizes mentoring and professional learning rather than top-down evaluation. However, the present findings indicate that supervision in the participating schools remained largely focused on administrative monitoring and lesson documentation, with relatively limited opportunities for reflective discussion between principals and teachers.

Similar observations have been reported in Montessori settings where maintaining pedagogical fidelity depends on continuous mentoring and reflective professional support rather than compliance with standardized evaluation procedures alone [19], [30]. These studies are not presented as direct comparisons with the Indonesian context; rather, they provide a broader perspective for interpreting the findings of the present study.

4.2. Teachers' need for Montessori-based supervision instruments

These findings suggest that teachers tended to perceive supervision primarily as an external evaluation mechanism rather than as an opportunity for professional learning. This perception may reflect the limited use of reflective dialogue and pedagogical feedback during supervision, highlighting the need for supervisory approaches that better support teacher agency and professional reflection. The second theme showed that both teachers and principals consistently emphasized the need for supervision instruments specifically designed for Montessori classrooms. Participants reported that existing supervision checklists provided limited pedagogical feedback and did not adequately address key Montessori learning areas, particularly language and mathematics. Instead, teachers preferred supervision that incorporated classroom observations, constructive feedback, and reflective dialogue. These findings indicate that teachers expect supervision to function as a collaborative process that supports professional growth rather than as a hierarchical assessment of compliance.

This interpretation is consistent with previous studies emphasizing that effective supervision is characterized by reflective mentoring and professional dialogue rather than checklist-based evaluation [31]. Likewise, research on Montessori education has highlighted the importance of reflective discussions between supervisors and teachers to maintain pedagogical fidelity and strengthen instructional practice [19]. Rather than suggesting that supervision should follow a particular national model, these studies support the interpretation that Montessori-specific supervision benefits from approaches that are responsive to the distinctive characteristics of Montessori pedagogy.

4.3. Challenges in implementing Montessori pedagogy

The third theme identified the main challenges in implementing Montessori pedagogy, especially in Language education. Teachers had difficulty transitioning children from learning the alphabet at home ("A, B, C") to Montessori phonics, which was confusing and slowed progress. This problem shows that the way schools teach is not in line with how people live at home. Similar tensions have been reported internationally. In the United States (US), Randolph *et al.* [32] noted that parents' traditional expectations often clash with Montessori's multisensory phonetic approach.

This tension suggests that Montessori implementation cannot be divorced from the broader socio-cultural context in which children develop. Without congruence between home and school practices, even well-thought-out pedagogical approaches may run into significant limitations. Another challenge identified in this study concerned the implementation of Montessori lesson presentations. Teachers acknowledged that important elements of the three-period lesson were sometimes omitted or presented in an incorrect sequence, while sensorial materials were not always used as intended. These findings suggest that maintaining Montessori fidelity requires not only appropriate teaching resources but also supervision and professional support that are aligned with Montessori principles. Previous research similarly emphasizes that the quality of Montessori implementation depends on the accurate application of core pedagogical practices and continuous professional guidance [19], [30].

The findings also indicate that limited opportunities for sustained professional development compounded these instructional challenges. Participants described supervision as occurring periodically, with relatively few opportunities for ongoing mentoring or reflective discussion. This interpretation is consistent with broader evidence suggesting that isolated workshops or infrequent supervision are less effective in supporting long-term improvements in instructional practice [33], [34].

Rather than suggesting that these challenges are unique to Indonesia or identical across Montessori contexts, the present findings illustrate how tensions between Montessori fidelity, teachers' professional support needs, and local educational expectations emerged within the participating schools. These context-specific findings contribute to understanding how Montessori supervision may be strengthened through more reflective, pedagogically aligned, and context-sensitive supervisory practices.

4.4. Best practices for Montessori-based supervision

This findings suggest several best practices for providing Montessori-Based supervision in ECE settings. These practices emerge from the experiences of the participants and are interpreted in relation to the literature on developmental supervision and Montessori pedagogy. Given that this study is in an exploratory phase, they should be taken as context-specific recommendations rather than generalizable practices.

4.4.1. Emphasizing observation-based supervision

Findings suggest that more focus on classroom observation may enhance supervision in Montessori settings. Participants reported that the existing supervision was mainly based on generic evaluation tools and provided little pedagogical feedback in the classroom. Classroom observation targeting key Montessori elements such as lesson presentation, the prepared environment, and children's independent work cycles may allow supervisors to provide feedback that is more directly aligned with teachers' instructional practices. This interpretation is consistent with Glickman *et al*. [11], who describe observation as a core component of developmental supervision.

4.4.2. Providing reflective and dialogic feedback

The study reveals that teachers value constructive feedback that encourages reflection on classroom practices. Participants emphasized the importance of opportunities to discuss classroom experiences, instructional challenges, and possible improvements through reflective dialogue. Reflective supervision helps teachers critically examine their instructional decisions and improve their teaching strategies [35].

4.4.3. Developing Montessori-based supervision instruments

The study finds that teachers require constructive feedback that promotes reflection on classroom practices. Therefore, good supervision should be a dialogue between supervisors and teachers; a reflective dialogue, not just administrative evaluation. Reflective supervision assists teachers in critically analyzing their instructional decisions and in refining their teaching approaches [28].

4.4.4. Addressing teachers' professional needs through supervision

The findings further suggest that supervision may serve as a source of ongoing professional learning by responding to teachers' identified needs. Participants expressed the need for guidance in Montessori lesson presentation, language instruction, and classroom implementation. Addressing these needs through observation, mentoring, and reflective feedback may contribute to teachers' professional development and support the implementation of Montessori pedagogy within the participating school [11].

4.5. Adopting Finland's mentoring culture and US reflective dialogue models in educational supervision

The findings of this study suggest that collaborative mentoring and reflective dialogue could serve as useful benchmarks for improving the Montessori-based supervision in the participating schools. The international experiences reported from Finland and the US are not presented as models to be directly adopted, but as examples of supervisory approaches that foreground teacher learning, professional reflection,

and collaborative mentoring. These principles are consistent with what teachers and principals in this study said they need from supervision—ongoing professional support beyond administrative evaluation.

Mentoring in Finland is based on professional trust and group learning. At the same time, studies from the US highlight reflective conversation as a key component of institutional monitoring. Instead, these cases provide a broader lens for understanding the findings, especially participants' desire for classroom observation, constructive feedback, and continued professional support, than as direct policy blueprints.

This approach is consistent with broader views that highlight education as a process that supports children's holistic development in cognitive, social, emotional, and personal domains [36]. Effective supervision in ECE provides meaningful learning environments that support optimal development during crucial periods of growth. Supervision practices also help reinforce teachers' pedagogical and professional competencies through reflective feedback, collaborative learning, and continuous professional development. Contemporary perspectives on instructional supervision further emphasize the changing roles of supervisors as mentors, facilitators, and instructional leaders who promote ongoing teacher improvement and the quality of educational practices [29].

However, putting these methods into use inside Montessori-based early childhood institutions could provide real difficulties. The results show that although participants noted few opportunities for mentoring and reflective communication, modern supervision techniques remain mostly compliance-focused. Therefore, rather than assuming direct transferability from other national settings, any adaptation of cooperative mentoring or reflective supervision should consider the organizational culture, resources, and educational environment of the participating schools.

5. CONCLUSION

According to this study, supervision in Montessori-based early childhood settings in Malang, East Java, Indonesia remains mostly administrative and relies on generic supervision instruments that do not completely reflect Montessori pedagogical principles. Teachers and administrators noted the need for supervision techniques more consistent with the Montessori approach, especially those stressing classroom observation, reflective discussion, and direction on applying fundamental practices, including phonics teaching and the three-period lesson. Based on these context-specific findings, several practical implications can be proposed for similar Montessori early childhood settings. First, performance feedback in Montessori supervision should place greater emphasis on central features of the Montessori learning environment, such as the prepared environment, work cycles, and developmentally appropriate learning sequences. Second, reflective conversations between mentor principals and teachers should be encouraged as an integral part of continuous professional development. Third, schools and education authorities should consider developing Montessori-specific supervision instruments to more accurately assess the fidelity of classroom practices to Montessori principles.

These insights are pertinent to bridging the divide between current supervision practices and the specific pedagogical needs of Montessori educators in the schools involved, and contribute to the literature on teacher evaluation. Nevertheless, some limitations must be recognized. Three kindergartens in one city participated in the study, limiting the generalizability of research findings, and longitudinal observations of supervision practice were not included. Future research should examine Montessori supervision across broader contexts, include longer-term observations, and develop and validate Montessori-aligned supervision instruments that can support teacher development and instructional quality.

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

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C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper.

INFORMED CONSENT

All subjects were asked to sign an informed consent form and told of the study's goal before the interviews took place. Voluntary participation was guaranteed, and participants' confidentiality and anonymity were protected. All interview recordings and associated papers were kept safely and utilized only for study objectives.

ETHICAL APPROVAL

This study was conducted under research permission issued by Universitas Negeri Malang. Before data collection, the permission letter was sent to the institutions taking part; permission to conduct the study was acquired by the school leaders.

DATA AVAILABILITY

Data are available from the authors upon reasonable request and will be shared in anonymized form to protect ethical compliance and confidentiality. The dataset is not publicly available due to containing information from human participants in educational institutions. Requests for access should be made to the corresponding author and will be considered in accordance with ethical and institutional requirements.

REFERENCES

[1] S. Burns, E. Yu, J. Perlman, K. Kahlon, and M. Perlman, "'It is almost impossible to get a spot when you need it': Understanding parental knowledge and experiences of Canada's new child care policy promoting access to quality early childhood education and care," *Early Childhood Research Quarterly*, vol. 73, pp. 69–81, 2025, doi: 10.1016/j.ecresq.2025.05.004.

[2] I. Pietropoli and P. Gracia, "Social inequalities in children's cognitive and socioemotional development: The role of home learning environments and early childhood education," *Research in Social Stratification and Mobility*, vol. 97, p. 101034, Jun. 2025, doi: 10.1016/j.rssm.2025.101034.

[3] K. Sindhu and N. Gupta, "An analysis of the factors affecting access to the early childhood education and care: a systematic literature review and bibliometric analysis," *Early Years*, vol. 45, no. 5, pp. 721–735, Oct. 2025, doi: 10.1080/09575146.2024.2417229.

[4] H. Huang *et al.*, "Development of human brain structural networks through infancy and childhood," *Cerebral Cortex*, vol. 25, no. 5, pp. 1389–1404, May 2015, doi: 10.1093/cercor/bht335.

[5] Y. Mou, E. Blok, M. Barroso, P. W. Jansen, T. White, and T. Voortman, "Dietary patterns, brain morphology and cognitive performance in children: Results from a prospective population-based study," *European Journal of Epidemiology*, vol. 38, no. 6, pp. 669–687, Jun. 2023, doi: 10.1007/s10654-023-01012-5.

[6] J. Su, Y. Zhong, and X. Chen, "Technology education in early childhood education: a systematic review," *Interactive Learning Environments*, vol. 32, no. 6, pp. 2848–2861, Jan. 2024, doi: 10.1080/10494820.2022.2160470.

[7] T. G. Yıldız *et al.*, "Education for sustainability in early childhood education: a systematic review," *Environmental Education Research*, vol. 27, no. 6, pp. 796–820, Jun. 2021, doi: 10.1080/13504622.2021.1896680.

[8] A. Alzahrani, "A systematic review of the use of information communication technology, including augmented reality, in the teaching of science to preschool children," *International Journal of Educational Research Open*, vol. 9, p. 100453, Dec. 2025, doi: 10.1016/j.ijedro.2025.100453.

[9] OECD, "Early childhood education and care workforce development," May 2022, doi: 10.1787/e012efc0-en.

[10] A. Rademacher, N. Bäker, U. von Düring, V. Hiltunen, and N. Goagoses, "The effects of early childhood education and care quality on academic competences in early primary school: A systematic review and meta-analysis," *European Journal of Psychology of Education*, vol. 40, no. 4, p. 110, Dec. 2025, doi: 10.1007/s10212-025-01005-w.

[11] C. D. Glickman, S. P. Gordon, and J. M. Ross-Gordon, *The basic guide to supervision and instructional leadership*. Upper Saddle River: Pearson Education, Inc., 2013.

[12] T. Karakose, S. Papadakis, T. Tülübaş, and H. Polat, "Understanding the Intellectual Structure and Evolution of Distributed Leadership in Schools: A Science Mapping-Based Bibliometric Analysis," *Sustainability*, vol. 14, no. 24, p. 16779, Dec. 2022, doi: 10.3390/su142416779.
[13] S. Papadakis, S. Kanadlı, A. Kardas, T. Tülübaş, T. Karakose, and H. Polat, "Investigating the Relationship Between Leadership for Learning and Student Achievement Through the Mediation of Teacher Performance: A Meta-Analytic Structural Equation Modeling (MASEM) Approach," *Education Sciences*, vol. 14, no. 12, p. 1320, Nov. 2024, doi: 10.3390/educsci14121320.
[14] R. Yirci, T. Karakose, I. Kocabas, T. Tülübaş, and S. Papadakis, "A Bibliometric Review of the Knowledge Base on Mentoring for the Professional Development of School Administrators," *Sustainability*, vol. 15, no. 4, p. 3027, Feb. 2023, doi: 10.3390/su15043027.
[15] I. Rahmi and S. Rassanjani, "Enhancing teacher quality in Indonesia: The impact of teacher professional development on achieving sustainable development goal 4.c," *Social Sciences and Humanities Open*, vol. 12, p. 102123, 2025, doi: 10.1016/j.ssaho.2025.102123.
[16] A. S. Lillard, *Montessori: The Science Behind the Genius*. Oxford: Oxford University Press, 2017.
[17] M. Turós, "Comparative analysis of the views of Montessori and Waldorf teacher trainers," *Social Sciences and Humanities Open*, vol. 9, p. 100855, 2024, doi: 10.1016/j.ssaho.2024.100855.
[18] C. Marshall, "Montessori education: a review of the evidence base," *npj Science of Learning*, vol. 2, no. 1, p. 11, Oct. 2017, doi: 10.1038/s41539-017-0012-7.
[19] A. Demangeon, S. Claudel-Valentin, A. Aubry, and Y. Tazouti, "A meta-analysis of the effects of Montessori education on five fields of development and learning in preschool and school-age children," *Contemporary Educational Psychology*, vol. 73, p. 102182, Apr. 2023, doi: 10.1016/j.cedpsych.2023.102182.
[20] J. W. Creswell and C. N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks: SAGE Publications, 2017.
[21] R. K. Yin, *Case Study Research and Applications: Design and Methods*. Los Angeles: SAGE Publications, 2018.
[22] M. Q. Patton, *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*, 4th ed. Thousand Oaks: SAGE Publications, 2015.
[23] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101, Jan. 2006, doi: 10.1191/1478088706qp063oa.
[24] J. Saldaña, *The Coding Manual for Qualitative Researchers*. Thousand Oaks: SAGE Publications, 2021.
[25] M. B. Miles, A. M. Huberman, and J. Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed. Thousand Oaks, USA: SAGE Publications, 2013.
[26] N. K. Denzin and Y. S. Lincoln, *The SAGE Handbook of Qualitative Research*, 5th ed. Los Angeles: SAGE Publications, 2018.
[27] A. M. Riazi, R. Rezvani, and H. Ghanbar, "Trustworthiness in L2 writing research: A review and analysis of qualitative articles in the Journal of Second Language Writing," *Research Methods in Applied Linguistics*, vol. 2, no. 3, p. 100065, Dec. 2023, doi: 10.1016/j.rmal.2023.100065.
[28] A. S. Lillard, "Shunned and Admired: Montessori, Self-Determination, and a Case for Radical School Reform," *Educational Psychology Review*, vol. 31, no. 4, pp. 939–965, Dec. 2019, doi: 10.1007/s10648-019-09483-3.
[29] C. D. Glickman, S. P. Gordon, and J. M. Ross-Gordon, *Supervision and instructional leadership: a developmental approach*, 10th ed. New York: Pearson, 2018.
[30] P. Courtier *et al.*, "Effects of Montessori Education on the Academic, Cognitive, and Social Development of Disadvantaged Preschoolers: A Randomized Controlled Study in the French Public-School System," *Child Development*, vol. 92, no. 5, pp. 2069–2088, Sep. 2021, doi: 10.1111/cdev.13575.
[31] C. Bjørndal, P. Mathisen, A.-C. Wennergren, and F. Thornberg, "Challenges of the supervision process in the teacher education practicum – A qualitative research review," *Teaching and Teacher Education*, vol. 146, p. 104619, Aug. 2024, doi: 10.1016/j.tate.2024.104619.
[32] J. J. Randolph *et al.*, "Montessori education's impact on academic and nonacademic outcomes: A systematic review," *Campbell Systematic Reviews: Better Evidence for a Better World*, vol. 19, no. 3, Sep. 2023, doi: 10.1002/cl2.1330.
[33] R. A. Muir, S. J. Howard, and L. Kervin, "Supporting early childhood educators to foster children's self-regulation and executive functioning through professional learning," *Early Childhood Research Quarterly*, vol. 67, pp. 170–181, 2024, doi: 10.1016/j.ecresq.2023.12.001.
[34] L. Darling-Hammond, A. C. W. Schachner, S. K. Wojcikiewicz, and L. Flook, "Educating teachers to enact the science of learning and development," *Applied Developmental Science*, vol. 28, no. 1, pp. 1–21, Jan. 2024, doi: 10.1080/10888691.2022.2130506.
[35] T. J. Sergiovanni and R. J. Starratt, *Supervision: A Redefinition*, 8th ed. Boston: McGraw-Hill Education, 2007.
[36] L. Darling-Hammond, L. Flook, C. Cook-Harvey, B. Barron, and D. Osher, "Implications for educational practice of the science of learning and development," *Applied Developmental Science*, vol. 24, no. 2, pp. 97–140, Apr. 2020, doi: 10.1080/10888691.2018.1537791.

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