
Adaptive Action-Based Management Model for Inclusive Early Childhood Education

Rini Triana, Nasir Usman*, and Niswanto

Master's Program in Educational Administration, Postgraduate-Syiah Kuala University,
Aceh, Indonesia
*nasir@usk.ac.id

Received
15/05/2026

Accepted
10/06/2026

Published
11/06/2026

DOI

10.59329/gawi.v6i1.281

ABSTRACT

This study aimed to develop an Adaptive Action-Based Inclusive School Management Model to enhance the efficacy of inclusive early childhood education (ECE) in Banda Aceh, Indonesia. Employing a qualitative school-based action research design across three inclusive ECE institutions, the study involved 13 purposively selected participants, including school principals, educators, special assistant teachers, parents, and an education office representative. The methodology was operationalized through two iterative cycles of planning, action, observation, and reflection, with interventions targeting inclusive management optimization via structured planning, stakeholder coordination, and systemic monitoring. Qualitative data derived from in-depth interviews, participant observation, and document analysis were processed utilizing the interactive qualitative analysis model of Miles, Huberman, and Saldaña, supported by NVivo software. planning practices were collaborative and child-centered but insufficiently documented, implementation was adaptive and outcome-oriented yet weakly coordinated, and evaluation effectively monitored child development but lacked institutional integration. Major constraints included limited government support, infrastructure, and teacher capacity, while adaptive strategies relied on collaboration, communication, and internal initiatives. The study proposes an Adaptive Action-Based Inclusive School Management Model characterized by iterative improvement, collaborative engagement, adaptive decision-making, and outcome-oriented evaluation. The results highlight the importance of strengthening systematic management practices and policy support to ensure sustainable inclusive education.

Keywords: Action research; Adaptive management; Early childhood education; Inclusive education; School management

How to cite:

Triana, R., Usman, N., & Niswanto, N. (2026). Adaptive action-based management model for inclusive early childhood education. *Gawi: Journal of Action Research*, 6(1), 33-52.

INTRODUCTION

Inclusive education has progressively transitioned from a rights-based discourse toward an efficacy-oriented paradigm, particularly within early childhood education (ECE), a critical developmental window wherein timely interventions yield the highest socio-cognitive returns. Empirical literature consistently confirms that inclusive learning environments foster not only academic acquisition but also social integration, emotional regulation, and long-term adaptive competencies among children with diverse needs ([Whitaker et al., 2023](#); [Malhotra, 2025](#); [Wu, 2025](#)). Within this contemporary conceptualization, inclusion extends beyond mere physical access, representing the structural capacity of educational systems to respond adaptively and equitably to heterogeneous learner profiles. Despite these conceptual advances, recent



scholarship identifies a persistent implementation bottleneck in the implementation of inclusive education, particularly at the level of school management. Over the past decade, increasing attention has been given to the role of school leadership in shaping inclusive practices through strategic planning, organizational restructuring, and instructional leadership ([Cevik, 2025](#); [Adams et al., 2023](#); [Abdullah et al., 2026](#)). Effective inclusive leadership is characterized by the articulation of a shared vision, the development of collaborative organizational cultures, and the integration of inclusive values into institutional processes. In addition, leadership approaches such as distributed leadership, data-driven decision-making, and stakeholder collaboration have been identified as critical determinants for the systemic sustainability of inclusive educational reforms ([Hasselgren et al., 2021](#); [Hassett et al., 2024](#)).

Empirical findings yet consistently reveal a disconnect between these theoretical frameworks and their practical implementation. In many educational settings, inclusive education is implemented in a fragmented and inconsistent manner, inclusive education is executed in a fragmented, episodic manner, lacking systemic coherence across planning, execution, and evaluation phases. Structural constraints, including limited financial resources, inadequate infrastructure, and unequal distribution of trained personnel, continue to hinder the effectiveness of inclusive initiatives ([Chandipwisa et al., 2026](#); [Rad et al., 2022](#); [Rasmani et al., 2025](#)). Furthermore, attitudinal barriers among educators and institutional resistance to change exacerbate these challenges, resulting in partial and unsustainable implementation. Recent studies further indicate that while schools have adopted various strategies to support inclusion, such as professional development programs, collaborative teaching approaches, and equity-based decision-making, these efforts are often episodic and not embedded within systematic management cycles. Data-driven practices, although widely recognized as essential for improving inclusive education, are still inconsistently applied and rarely integrated into continuous improvement processes ([Hejazi et al., 2026](#); [Cruz et al., 2023](#)). Consequently, inclusive education outcomes vary significantly across institutions, with some schools demonstrating positive progress while others struggle due to weak coordination and lack of systemic alignment ([Aldhilan et al., 2025](#); [Malhotra, 2025](#)).

These international challenges are prominently mirrored within developing countries, including Indonesia. National data indicate that children with disabilities continue to experience limited access to early childhood education compared to their peers, highlighting persistent inequities in participation. At the institutional level, studies have documented that many schools lack structured planning documents, systematic evaluation mechanisms, and adequately trained personnel to implement inclusive education effectively ([Alfaro & Perez, 2025](#); [Hikmat et al., 2025](#)). More importantly, the integration of core management functions, including planning, organizing, actuating, and controlling, remains weak, resulting in fragmented and unsustainable practices. In early childhood education settings, these managerial challenges become more complex due to limited institutional capacity, minimal access to specialized professionals, and the absence of standardized assessment systems. As a result, inclusive practices often operate in an adaptive but informal manner, relying heavily on individual teacher initiatives rather than coordinated management strategies. While such instructional fluidity permits immediate responsiveness to learner exigencies, it exposes a lack of institutionalization, which is fatal to long-term sustainability and scalability.

Field observations in inclusive early childhood education institutions in Banda Aceh corroborate these systemic structural deficits. Preliminary assessments revealed an absence of data-driven planning frameworks, inadequate teacher efficacy in addressing diverse learning dynamics, weak inter-stakeholder coordination, and a complete deficit in formalized monitoring and evaluation apparatuses. These indices indicate that inclusive management within the region remains reactive, disjointed, and practice-dependent rather than strategically engineered and iteratively refined.

Despite extant literature extensively exploring research on inclusive education, previous studies have predominantly focused on policy implementation, leadership characteristics, teacher readiness, and barriers to inclusion. While these studies provide valuable insights, there

remains limited empirical evidence explaining how the core management functions of inclusive early childhood education, namely planning, organizing, actuating, and controlling can be systematically improved through school-based action cycles, particularly in resource-constrained contexts. The prevailing body of research remains largely descriptive and cross-sectional, offering minimal insight into how administrative practices transform through iterative interventions, systematic reflection, and continuous optimization cycles. Consequently, the precise mechanisms required to institutionalize inclusive school management within developing regions remain undertheorized. This gap is particularly important in the context of Banda Aceh, where inclusive ECE institutions operate under limited resources and depend heavily on adaptive practices rather than formal management systems. Therefore, empirical investigation is required to illuminate how action-oriented interventions can systematically augment managerial efficacy to support sustainable inclusive education.

To address this gap, this study adopts a School Action Research (SAR) methodology, which facilitates the optimization of inclusive school management through iterative cycles of planning, action, observation, and reflection (Wang et al., 2020). The study aims to develop an adaptive action-based school management model for improving the effectiveness of inclusive early childhood education in Banda Aceh. Accordingly, this study addresses three research questions: (1) What managerial challenges are encountered in inclusive early childhood education? (2) How can school-based action research interventions improve planning, implementation, and evaluation practices? and (3) What adaptive management model emerges from these intervention cycles? The novelty of this study lies in integrating action research with inclusive school management to develop a context-specific adaptive management model in resource-constrained settings. The findings contribute to educational management literature and provide practical guidance for strengthening inclusive education.

METHODS

Research Design

The study spanned a four-month duration from January to April 2025, during which two sequential action research cycles were executed across the participating institutions. Each cycle followed the stages of planning, action, observation, and reflection. Cycle 1 focused on identifying managerial challenges and implementing initial interventions, while Cycle 2 emphasized refinement and strengthening based on the results of the first cycle. The interventions targeted four key management domains: planning, organizing, implementation, and evaluation. Specific intervention activities included the development of structured planning documents for inclusive education, regular stakeholder coordination meetings, establishment of communication mechanisms between schools and parents, and the introduction of simple monitoring and evaluation instruments. Indicators used to assess improvement included: (1) the availability and quality of planning documents, (2) the effectiveness of coordination among stakeholders, (3) the implementation of inclusive learning support practices, and (4) the use of evaluation and monitoring procedures in school management. These indicators were used as reference points during observation and reflection stages across both cycles.

Research Setting and Participants

The study was conducted in three inclusive early childhood education institutions in Banda Aceh: TK Harsya Ceria, TK Negeri 5 Banda Aceh, and TK Permata Sunnah. These institutions were selected purposively based on their implementation of inclusive education programs and their relevance to the research objectives. Participants were selected using purposive sampling, emphasizing depth and relevance of information rather than statistical representation. The participants included the following: (1) School principals, (2) Regular teachers, (3) Special assistant teachers (GPK), (4) Parents of children with special needs, and (5) A representative from the local education office.

The initial number of participants was approximately 13 individuals, with flexibility to expand based on data saturation principles. This composition ensured a multi-perspective understanding of inclusive school management practices.

Action Research Procedure

The research was conducted through two iterative cycles, each consisting of four stages.

a. Cycle 1: Diagnostic and Initial Intervention

1. **Planning:** Identification of managerial gaps, particularly the absence of structured planning, weak coordination, and lack of evaluation systems.
2. **Action:** Implementation of initial interventions, including development of simple inclusive management plans, coordination meetings, and basic monitoring tools.
3. **Observation:** Data collection on changes in managerial practices and classroom implementation.
4. **Reflection:** Evaluation of initial outcomes and identification of remaining gaps.

b. Cycle 2: Strengthening and Refinement

1. **Planning:** Revision of intervention strategies based on Cycle 1 findings.
2. **Action:** Strengthening management practices through structured planning documents, improved coordination mechanisms, and data-based evaluation.
3. **Observation:** Monitoring improvements in effectiveness and stakeholder involvement.
4. **Reflection:** Final evaluation of intervention effectiveness and formulation of a contextual management model.

This cyclical approach ensured that the findings were not merely descriptive but transformative and practice-oriented.

Data Collection Techniques

Data were collected using three primary techniques, applied in a triangulated manner.

1. **In-depth Interviews**
Semi-structured interviews were conducted to explore participants' experiences, strategies, and challenges in implementing inclusive education management. This method enabled access to reflective and experiential data.
2. **Participant Observation**
Observations were conducted directly within school settings to capture real-time managerial practices, classroom interactions, and inclusive learning processes.
3. **Document Analysis**
Relevant documents such as school programs, standard operating procedures (SOPs), evaluation reports, and policy documents were analyzed to support and validate findings.

These techniques were implemented systematically to ensure data richness and contextual accuracy.

Data Analysis

Data analysis followed the interactive model of Miles, Huberman, and Saldaña, consisting of three operations as follows: (1) data condensation, (2) data display, and (3) conclusion drawing/verification. All interview and observation data were transcribed and coded thematically using qualitative analysis procedures supported by NVivo software to enhance analytical rigor and transparency. The analysis focused on identifying patterns related to: (1) management practices, (2) intervention impacts, and (3) changes across action research cycles.

Trustworthiness

To ensure the rigor and validity of findings, the study applied the following strategies.

1. Triangulation of data sources and methods
2. Member checking to validate interpretations with participants
3. Peer debriefing to reduce researcher bias

4. Audit trail to ensure transparency of the research process

These strategies enhanced credibility, dependability, and confirmability within qualitative research frameworks.

Ethical Considerations

Ethical procedures were strictly followed throughout the research process. Informed consent was obtained from all participants, and confidentiality was maintained by anonymizing personal and institutional identities. The research also received formal permission from relevant educational authorities in Banda Aceh.

RESULT AND DISCUSSION

Overview of Findings

This study reveals that inclusive school management in ECE institutions in Banda Aceh operates in a practice-based and adaptive manner. The findings indicate a strong emphasis on child development outcomes, collaborative engagement, and flexible instructional practices. However, these practices are not yet fully supported by systematic managerial structures. To provide a comprehensive understanding, the findings are organized into four main domains: planning, implementation, evaluation, and constraints and strategies. Each domain is analyzed using NVivo-based thematic exploration, including hierarchy charts, word clouds, and matrix coding results, to identify patterns, relationships, and intensity of themes.

Table 1 Thematic matrix of inclusive school management improvement across action research cycles

Theme	Initial Condition	Cycle 1 Improvement	Cycle 2 Improvement	Implication for Model Development
Planning	Informal and undocumented planning practices	Introduction of inclusive planning formats and stakeholder meetings	More structured planning and stronger parental involvement	Adaptive planning component
Implementation	Teaching practices depended on individual teacher initiatives	Increased collaboration among teachers and GPK	More coordinated implementation of inclusive learning support	Collaborative implementation component
Evaluation	Evaluation focused only on child development outcomes	Introduction of simple monitoring tools	Improved use of evaluation data for decision-making	Outcome-oriented evaluation component
Coordination	Limited communication among stakeholders	Regular coordination meetings initiated	Stronger collaboration between schools and families	Collaborative engagement component

Action Research Cycles and Management Improvements

Prior to the intervention, inclusive school management practices in the participating institutions were characterized by informal planning, limited documentation, irregular stakeholder coordination, and the absence of systematic monitoring procedures. Although schools demonstrated strong commitment to inclusion, management practices relied heavily on individual experience and informal communication.

Cycle 1 focused on identifying managerial gaps and introducing initial interventions. These interventions included the development of simple inclusive planning formats, regular

coordination meetings involving teachers and parents, and the introduction of basic monitoring tools. Observation results indicated improvements in communication and planning consistency; however, documentation practices remained limited and evaluation procedures were not yet systematically implemented.

The results from Cycle 1 indicate several weaknesses were identified, particularly the need for stronger documentation, more consistent stakeholder involvement, and better integration of evaluation data into management processes. Consequently, Cycle 2 emphasized strengthening planning documentation, formalizing coordination mechanisms, and improving the use of monitoring information for decision-making.

Observations conducted during Cycle 2 demonstrated further improvements in management practices. Planning documents were used more consistently, stakeholder coordination became more regular, and monitoring activities were increasingly integrated into routine school management. These changes indicate that the interventions contributed to strengthening the planning, implementation, and evaluation functions of inclusive school management.

Table 2 Changes in inclusive school management across action research cycles

Management Aspect	Initial Condition	Cycle 1	Reflection	Cycle 2
Planning	Informal and weakly documented	Planning formats introduced	Documentation remained inconsistent	Planning documents used more systematically
Coordination	Irregular stakeholder communication	Coordination meetings initiated	Participation varied across stakeholders	Coordination became more structured and routine
Evaluation	Focused mainly on child outcomes	Monitoring tools introduced	Evaluation data rarely used for management decisions	Evaluation information increasingly used in planning and coordination
Parent Involvement	Informal participation	Parents involved in meetings and planning	Need for stronger engagement identified	More active and regular parental participation

Inclusive School Management Planning

Planning practices in the participating schools were primarily based on initial child assessment, communication with parents, and collaborative discussions among teachers and school leaders. Evidence from observations and planning documents indicated that schools attempted to adapt learning plans to children's individual needs through lesson plans (RPPH) and Individual Learning Plans (ILP/RPI). However, documentation practices varied across institutions and were often incomplete.

These findings suggest that planning was responsive to learner diversity but remained weakly institutionalized. During Cycle 1, schools introduced simple planning formats and coordination meetings to improve communication and planning consistency. Reflection results indicated better alignment between assessment results and learning plans. In Cycle 2, planning practices became more structured through improved documentation and more systematic stakeholder involvement.

The progression across cycles demonstrates the importance of adaptive planning as a foundational component of the Adaptive Action-Based Inclusive School Management Model. NVivo's hierarchy chart of inclusive planning themes is listed in Figure 1.

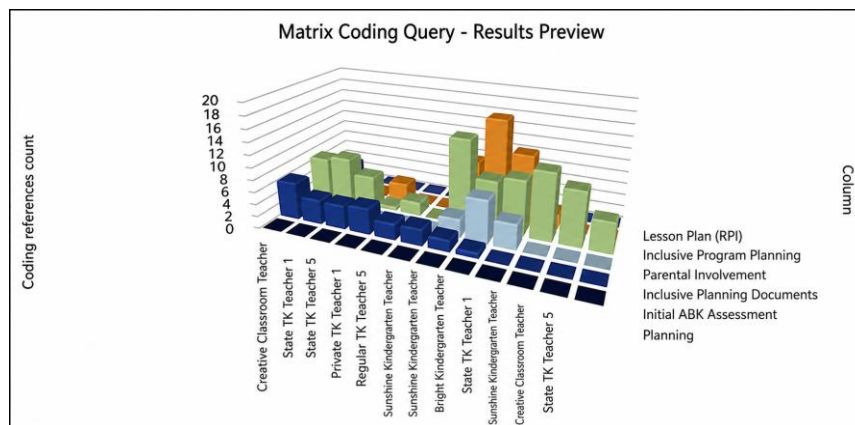


Figure 3 NVivo matrix coding results of inclusive planning

The matrix coding results illustrate the intensity of themes across participants. Parental involvement and inclusive program planning show the highest frequency, indicating their dominant role in planning practices. In contrast, individual learning plan development and formal planning documentation appear less prominent, suggesting limited institutionalization.

The matrix coding analysis provides quantitative support for the previous findings. The high frequency of parental involvement confirms that planning is strongly driven by collaborative interactions. Meanwhile, the relatively lower intensity of formal planning components, such as structured documents and individualized plans, indicates that planning practices are not yet systematically embedded within institutional frameworks. Planning is collaborative but non-systemic, relying more on experience and communication than structured management systems.

Evidence from school documents and classroom observations indicates that planning practices were primarily developed through informal discussions among teachers, school leaders, and parents. Review of lesson plans (RPPH) and Individual Learning Plans (ILP/RPI) showed that schools attempted to accommodate children's diverse needs; however, documentation quality varied across institutions. Observation records further indicated that planning decisions were frequently adjusted based on children's developmental progress and parental input.

Document analysis revealed that inclusive planning was generally responsive to learner needs but lacked standardized formats and systematic documentation procedures. These findings support the interpretation that planning practices were collaborative and adaptive, although not yet fully institutionalized.

Implementation of Inclusive Education

The classroom observation results showed that implementation practices were highly adaptive and focused on children's developmental progress. Teachers modified learning activities according to students' needs and utilized direct mentoring, concrete learning media, and flexible instructional strategies. The presence of special assistant teachers (GPK) further supported individualized learning processes.

Interpretation of these findings indicates that implementation effectiveness was largely dependent on teachers' adaptive capacity rather than formal management systems. During Cycle 1, coordination among teachers and support personnel was strengthened through regular meetings and communication mechanisms. In Cycle 2, collaboration became more systematic, resulting in more consistent implementation practices across classrooms. These improvements informed the collaborative implementation dimension of the proposed management model.

Figure 4 illustrates the distribution of key themes in the implementation of inclusive education. Child development outcomes emerge as the most dominant component, followed by support mechanisms and school strategies. This indicates that implementation practices are strongly focused on achieving developmental progress.

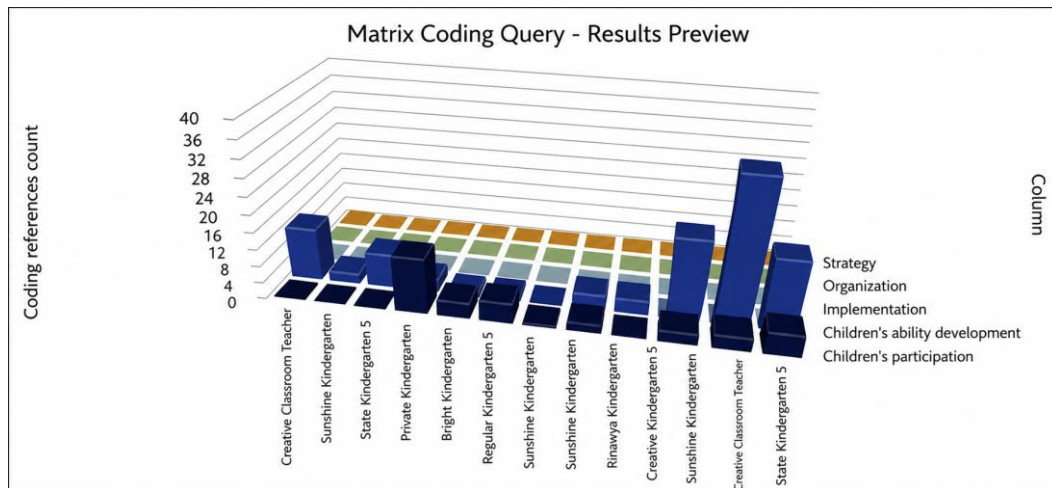


Figure 6 NVivo matrix coding results of inclusive education implementation

The matrix coding results demonstrate the distribution of implementation-related themes across participants. Child development outcomes appear as the most dominant component, followed by implementation practices and strategic actions. In contrast, organizational aspects and student participation show relatively lower intensity, indicating limited structural support in implementation. The matrix coding analysis confirms that implementation is strongly oriented toward achieving child development outcomes. The high intensity of implementation and strategy-related themes indicates that teachers actively adapt instructional practices to meet students' needs. However, the relatively low emphasis on organizational structure and student participation suggests that implementation remains insufficiently supported by systematic management processes. Implementation is highly adaptive and outcome-oriented, but lacks strong organizational and managerial structure.

Classroom observations indicate that teachers regularly modified learning activities to accommodate differences in children's abilities and developmental levels. Direct mentoring by special assistant teachers (GPK) was observed in several learning sessions, particularly when children required additional instructional support. Field notes also indicated frequent use of concrete learning materials and individualized assistance to maintain participation and engagement.

These observational findings demonstrate that implementation practices were highly adaptive and responsive to children's needs. However, evidence from school records suggested that coordination procedures and documentation of instructional adaptations were not consistently maintained across institutions.

Evaluation of Inclusive Education

Evaluation practices were primarily evidenced through daily observations, student portfolios, and semester reports. These instruments were used to monitor child development and communicate progress to parents. Observation records showed that evaluation activities were consistently conducted at the classroom level but were less evident at the institutional level.

This pattern suggests that evaluation systems were effective in assessing individual child outcomes but had limited capacity to support organizational learning and management improvement. During Cycle 1, simple monitoring tools were introduced to strengthen evaluation procedures. In Cycle 2, schools demonstrated greater use of evaluation information in planning and coordination activities. These developments contributed to the outcome-oriented evaluation component of the Adaptive Action-Based Inclusive School Management Model. The NVivo hierarchy chart for inclusive education evaluation is shown in Figure 7.

The prominence of terms such as “development,” “evaluation,” and “report” suggests that evaluation practices are strongly oriented toward documenting individual learning progress. The frequent appearance of “teacher” and “classroom” indicates that evaluation is closely tied to daily instructional activities. However, the absence of terms related to institutional monitoring and management systems reinforces the finding that evaluation remains practice-based and not fully integrated into a structured management framework.

These findings support the hierarchy analysis in Figure 7, confirming that evaluation practices are predominantly child-centered and focused on developmental outcomes rather than institutional performance. The results of the NVivo matrix coding of the inclusive education evaluation are listed in Figure 9.

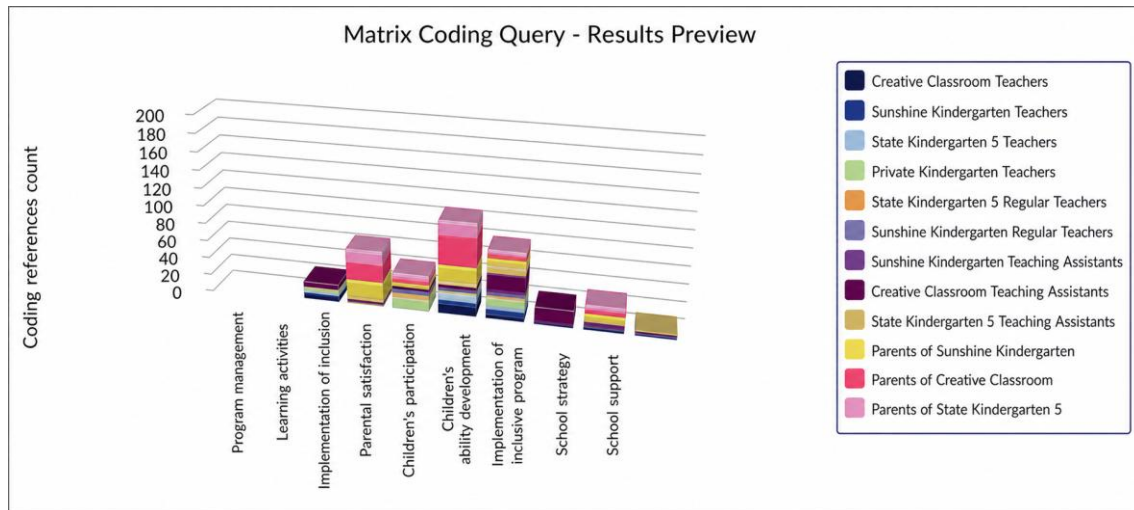


Figure 9 NVivo matrix coding results of inclusive education evaluation

The matrix coding results show the distribution of evaluation-related themes across participants. Evaluation of child development and instructional practices appear as the most dominant components, while principal monitoring and institutional evaluation show relatively low intensity, indicating limited systemic evaluation practices.

The matrix coding analysis confirms that evaluation practices are predominantly focused on assessing children's development and classroom-level instructional processes. The relatively high intensity of these components indicates that evaluation is closely linked to daily learning activities. However, the low emphasis on principal monitoring and institutional evaluation suggests that evaluation systems at the organizational level remain underdeveloped.

These findings reinforce the patterns identified in Figures 7 and 8, confirming that evaluation practices are primarily child-centered and lack integration into broader management and monitoring systems. Evaluation is strong at the micro level (child-focused) but weak at the macro level (institutional management).

Document analysis revealed that evaluation practices were primarily conducted through observation records, developmental portfolios, and semester reports. These documents provided evidence of regular monitoring of children's developmental progress and were commonly used during communication with parents. Observation data further showed that evaluation activities were embedded within daily classroom routines.

Despite these strengths, institutional documents rarely demonstrated systematic use of evaluation findings for school-level decision-making. This suggests that evaluation was effective at the child level but less developed as a management and quality assurance mechanism.

The word cloud highlights the most frequently occurring terms related to constraints in inclusive education. Dominant terms such as “training,” “teacher,” “school,” and “inclusive education” indicate that challenges are primarily associated with limited professional development, resource availability, and institutional capacity.

The prominence of terms such as “training” and “teacher” suggests that human resource limitations are a critical challenge in inclusive education implementation. The frequent appearance of “school,” “facilities,” and “program” further indicates that constraints are closely related to institutional capacity and resource availability. Additionally, the presence of “policy” and “communication” highlights the role of systemic and organizational factors in shaping these challenges. These findings support the hierarchy analysis in Figure 10, confirming that constraints in inclusive education are predominantly structural and systemic rather than purely instructional. The hierarchy chart of NVivo's inclusive education strategies is shown in Figure 12.

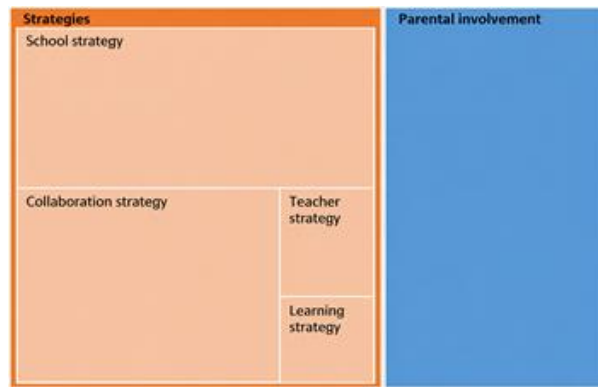


Figure 12 NVivo hierarchy chart of strategies in inclusive education

Figure 12 illustrates the dominant strategies employed to address challenges in inclusive education. School strategies and collaborative strategies emerge as the most prominent approaches, followed by parental involvement. This indicates that schools rely heavily on internal and collaborative efforts to sustain inclusive practices.

The dominance of school and collaborative strategies indicates that institutions actively develop internal mechanisms to overcome existing constraints. Parental involvement further strengthens these efforts by providing additional support and contextual understanding. However, the reliance on internal strategies suggests that solutions are largely adaptive and practice-based rather than supported by formal systemic frameworks. These strategies emerge as direct responses to the structural constraints identified earlier, particularly limited government support, infrastructure, and teacher capacity. The NVivo word cloud on strategies in inclusive education is listed in Figure 13.



Figure 13 NVivo word cloud of strategies in inclusive education

The word cloud highlights the most frequently occurring terms related to strategies in inclusive education. Dominant terms such as “communication,” “learning,” “teacher,” and “inclusive” indicate that strategies are centered on interaction, instructional adaptation, and collaborative support mechanisms.

The prominence of terms such as “communication” and “learning” suggests that strategies are strongly interaction-driven and focused on improving instructional practices. The frequent appearance of “teacher,” “support,” and “inclusive” indicates that teachers play a central role in adapting learning processes to meet diverse student needs. Additionally, the presence of “home” highlights the importance of collaboration between schools and families.

These findings support the hierarchy analysis in Figure 12, confirming that inclusive education strategies are primarily collaborative and practice-based, relying on communication and instructional adaptation. Constraints are structural and systemic, while solutions are adaptive and practice-based.

Planning of Inclusive School Management: Collaborative yet Non-Systemic

The empirical findings elucidate that planning practices within inclusive ECE institutions in Banda Aceh are profoundly collaborative and child-centered, yet remain structurally un-institutionalized. NVivo analysis confirms that parental involvement and initial assessment are the most dominant components in planning, indicating that decision-making processes are largely driven by contextual knowledge rather than formalized systems. This aligns with contemporary perspectives on inclusive education, which emphasize the importance of family and school partnerships in designing responsive learning environments. Studies indicate that parental engagement enhances contextual understanding of children's needs and improves the relevance of instructional planning (Kristjansdottir et al., 2020; Crisol-Moya et al., 2022). In this study, parents function not merely as stakeholders but as co-constructors of educational planning, reinforcing a participatory model of inclusive education.

Moreover, the use of initial assessment (needs-based identification) as a foundation for planning reflects a shift toward child-centered educational design, consistent with research highlighting the importance of individualized planning (Pratiwi et al., 2025). The development of Individual Learning Plans (ILP/RPI), although present, remains inconsistently applied, indicating a partial adoption of individualized education principles. However, a critical issue emerges in the form of weak formalization of planning processes. The dominance of informal and flexible planning practices suggests that planning is practice-driven rather than system-driven. From a management perspective, this reflects a limitation in the *planning function* (POAC), which ideally requires systematic, data-driven, and documented processes (Woods, 2021).

These findings reinforce prior studies that identify limited teacher competence, lack of structured planning tools, and insufficient institutional support as major barriers to effective inclusive education (Alfaro & Perez., 2025; Hikmat et al., 2025). Thus, while planning practices in Banda Aceh demonstrate strong adaptive and collaborative characteristics, they require systematization and professionalization to function as a strategic foundation for inclusive school management.

While previous studies have highlighted the importance of parental involvement and individualized planning in inclusive education, the present study suggests that collaboration alone is insufficient to ensure effective management. The findings indicate that planning becomes sustainable only when adaptive practices are supported by simple but structured management mechanisms. This extends existing literature by demonstrating that the challenge in resource-constrained settings is not the absence of collaboration, but the limited institutionalization of collaborative practices. Therefore, the proposed model emphasizes adaptive planning that combines flexibility with systematic documentation.

Implementation of Inclusive Education: Adaptive but Weakly Structured

The implementation of inclusive education (actuating function) is characterized by adaptive, interaction-based, and outcome-oriented practices, with a strong emphasis on children's developmental progress. NVivo findings indicate that child development outcomes and direct mentoring are the most dominant themes in implementation, highlighting the centrality of teacher–child interaction in inclusive classrooms. This reflects an outcome-based orientation, where success is measured through observable improvements in children's communication, social interaction, and independence. Such findings are consistent with recent studies that emphasize developmental outcomes as primary indicators of inclusive education effectiveness ([Nteropoulou-Nterou & Gelastopoulou, 2026](#)).

The role of teachers, particularly special assistant teachers (GPK), emerges as a critical factor. Teachers act not only as instructors but also as facilitators, mediators, and active supporters, providing individualized assistance to children. This supports findings from Dionne et al. ([2025](#)), which highlight that intensive teacher support significantly enhances participation and engagement in inclusive classrooms. However, despite these strengths, implementation remains insufficiently structured at the managerial level. NVivo matrix coding reveals that elements such as organizational coordination, systematic implementation of ILP, and structured collaboration are present but not dominant. This indicates that implementation is largely dependent on individual teacher capacity rather than institutional systems.

From a management perspective, this suggests that the *actuating function* is not fully optimized. Ideally, implementation should involve coordinated mobilization of resources, clear role distribution, and structured operational systems. Instead, the findings indicate a model of Adaptive Action-Based Inclusive School Management Model implementation, where decisions are made dynamically based on classroom realities. Furthermore, the relatively low emphasis on learning modification and student participation suggests that the principles of Universal Design for Learning (UDL) have not been fully implemented. This limitation reduces accessibility and inclusivity, particularly for children with diverse learning needs.

Variation across the schools further highlights disparities in managerial capacity. Some institutions demonstrate more structured implementation, while others rely heavily on adaptive practices. This confirms that school leadership and organizational capacity are key determinants of inclusive education effectiveness ([Abdullah et al., 2026](#); [Cevik, 2025](#)).

A notable contribution of this study is the identification of adaptive implementation as both a strength and a limitation. Previous studies generally regard instructional flexibility as a positive characteristic of inclusive education. However, the findings of this study reveal that excessive reliance on individual teacher adaptation may create inconsistency across classrooms and reduce organizational sustainability. This finding suggests that adaptive practices require managerial coordination to ensure continuity beyond individual teacher capacity.

Evaluation of Inclusive Education: Strong at Micro-Level, Weak at System-Level

The evaluation of inclusive education in this study is predominantly child-centered and outcome-based, focusing on developmental progress and parental satisfaction. NVivo analysis shows that child development and evaluation of development are the most dominant themes, while program-level evaluation and leadership monitoring remain minimal. This indicates that evaluation practices are primarily conducted at the micro level (individual child) rather than at the macro level (program and institutional management). The use of observations, portfolios, and daily assessments reflects an authentic assessment approach, which is widely recognized as appropriate for early childhood education ([Dang et al., 2025](#)). These methods allow teachers to capture real-time developmental changes and provide context-sensitive evaluations.

Additionally, the involvement of parents in evaluation reflects a user-based evaluation model, where feedback from service users contributes to assessing program effectiveness. This aligns with research emphasizing the importance of stakeholder participation in educational evaluation ([Ackah-Jnr, 2026](#)). However, the study reveals a significant managerial gap in evaluation systems. Key limitations include as follows: (1) Absence of standardized evaluation instruments,

(2) Lack of systematic monitoring by school leadership , and (3) Limited use of evaluation data for decision-making .

From a management perspective, this indicates that the *controlling function* is not fully operational as a quality assurance mechanism. Instead of functioning as a data-driven system for continuous improvement, evaluation remains largely descriptive and fragmented. Within a broader quality management framework, effective evaluation should support continuous improvement cycles, integrating planning, implementation, monitoring, and feedback. The current findings suggest that such integration is still lacking, limiting the ability of schools to refine and sustain inclusive practices. Furthermore, limited leadership involvement in monitoring indicates that instructional leadership in inclusive education remains weak, which is consistent with findings from Ghamrawi (2023).

This study extends previous research by highlighting a mismatch between child-level evaluation and institutional-level evaluation. While most studies emphasize developmental assessment as an indicator of inclusion success, the findings demonstrate that sustainable inclusive education also requires management-level evaluation systems. Without organizational monitoring and feedback mechanisms, schools may struggle to translate individual assessment results into long-term institutional improvement.

Constraints and Adaptive Strategies in Inclusive School Management

The study identifies that constraints in inclusive school management are multidimensional, involving both structural and internal factors. NVivo analysis reveals that the most dominant constraints include as follows: (1) Limited government support, (2) Inadequate infrastructure, (3) Shortage of trained teachers, and (4) Insufficient professional development

These findings indicate that inclusive education implementation is significantly influenced by external systemic limitations, particularly in policy execution and resource allocation. The lack of operational support from education authorities suggests that inclusive policies have not been fully translated into practical and technical assistance at the school level, consistent with findings from Bipath et al. (2021). Similarly, inadequate facilities and limited human resources align with studies emphasizing the importance of infrastructure and teacher competence in inclusive education (Rad et al., 2022; Rasmani et al., 2025). In response, schools adopt adaptive and context-based strategies as follows: (1) Strengthening internal school initiatives, (2) Enhancing teacher collaboration, (3) Involving parents as active partners , and (4) Improving communication mechanisms.

These strategies indicate the emergence of adaptive school management, where institutions respond flexibly to constraints using available resources. This aligns with the concept of adaptive leadership and management, which emphasizes responsiveness and contextual problem-solving (Dang et al., 2025). Notably, communication emerges as a central strategy, facilitating coordination among teachers, parents, and school leaders. This reflects principles of participatory management, where shared decision-making enhances organizational effectiveness. However, these strategies remain largely practice-based rather than system-based, indicating that solutions are reactive rather than structurally embedded. This reinforces the need for integrating adaptive practices into formal management systems to ensure sustainability.

The findings suggest that adaptive strategies are most effective in contexts where schools possess sufficient internal commitment and collaborative capacity despite external resource limitations. However, these strategies should not be interpreted as substitutes for policy support. Rather, adaptive management functions as a compensatory mechanism that enables schools to maintain inclusive practices under constrained conditions. Consequently, the effectiveness of the proposed model may vary depending on leadership capacity, stakeholder engagement, and the availability of institutional support.

Theoretical Contribution: Adaptive Practice-Based Management Model

To clarify the conceptual relationship among the theoretical frameworks used in this study before discussing the proposed model, the POAC framework provides the managerial structure through

which planning, implementation, and evaluation processes are examined. The CIPP model complements this framework by explaining how management effectiveness can be assessed through context, input, process, and product dimensions. Within the implementation process, Universal Design for Learning (UDL) serves as a pedagogical principle for accommodating learner diversity, while inclusive leadership facilitates collaboration among teachers, parents, and school leaders. Adaptive management explains how schools respond to structural constraints and resource limitations through flexible decision-making. Finally, action research functions as the mechanism through which these management processes are continuously improved through iterative cycles of planning, action, observation, and reflection. Together, these frameworks form an integrated conceptual foundation for the Adaptive Action-Based Inclusive School Management Model developed in this study

A key contribution of this study is the identification of an Adaptive Action-Based Inclusive School Management Model, derived from NVivo project mapping and cross-analysis of planning, implementation, evaluation, and constraints. This model is characterized by as follows: (1) Practice-based decision-making, (2) Adaptive and flexible processes, (3) Outcome-oriented evaluation, (4) Collaborative stakeholder engagement, and (5) Limited system formalization

Unlike classical linear management models (POAC), this model operates as a dynamic and network-based system, where components interact continuously rather than sequentially. This finding extends existing literature by demonstrating that in resource-constrained contexts, inclusive education management evolves through iterative practice and adaptation, rather than through rigid structural frameworks.

This model operates as a dynamic and network-based system in which planning, implementation, evaluation, and stakeholder collaboration interact continuously. The novelty of this study lies not merely in identifying adaptive practices, but in explaining how these practices can be organized into a management framework for inclusive early childhood education operating under resource constraints.

The model is particularly applicable in schools that face limitations in infrastructure, professional support, and funding but possess strong collaborative relationships among teachers, parents, and school leaders. However, given that the empirical data were gathered across a targeted selection of inclusive ECE sites within Banda Aceh, these findings must be generalized with appropriate contextual caution. Future studies are needed to test the model in different institutional and geographical settings and to examine its long-term effectiveness.

The progression observed from the initial condition through Cycle 1 and Cycle 2 demonstrates that management improvements did not occur automatically but emerged through iterative processes of planning, action, observation, and reflection. This finding supports the action research perspective that sustainable organizational change is achieved through continuous cycles of improvement rather than through one-time interventions.

The proposed model integrates planning, implementation, evaluation, leadership, inclusion, and adaptation as a whole process. These components operate as interconnected elements within a continuous improvement system. Management functions (POAC) provide the organizational structure, inclusive leadership and UDL guide implementation practices, CIPP supports evaluation and feedback processes, adaptive management enables contextual responsiveness, and action research drives ongoing refinement. This integration distinguishes the proposed model from conventional management approaches that tend to treat these dimensions independently.

CONCLUSION

This study demonstrates that the effectiveness of inclusive early childhood education in Banda Aceh is driven more heavily by localized, adaptive management practices than by the mere existence of formal policies alone. The results show that planning practices were collaborative but insufficiently documented, implementation was adaptive but weakly coordinated, and evaluation was effective at the child level but limited at the institutional level. Across the action research cycles, improvements were observed in planning documentation,

stakeholder coordination, and monitoring practices. These findings led to the development of an Adaptive Action-Based Inclusive School Management Model characterized by adaptive planning, collaborative implementation, outcome-oriented evaluation, and continuous improvement processes.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

REFERENCES

- Abdullah, N., Lajuma, S., Jafar, M. F., et al. (2026). Leadership strategies for inclusive education: How school principals support special needs students. *Journal of Education and Learning*, 20(2), <https://doi.org/10.11591/edulearn.v20i2.23614>
- Ackah-Jnr, F. R. (2026). Enabling inclusive education: The leadership ecosystem in an early childhood-school-community context. *International Journal of Leadership in Education*, 29(2), 275-293. <https://doi.org/10.1080/13603124.2022.2108508>
- Adams, D., Hussain, S., & Tan, K. L. (2023). Inclusive leadership for schools: Practices, challenges, and future directions. In *Educational leadership: Contemporary theories, principles, and practices* (pp. 85-99). https://doi.org/10.1007/978-981-99-8494-7_6
- Aldhilan, D., Rafiq, S., & Afzal, A. (2025). Navigating barriers and building pathways: Inclusive education for children with special needs. *F1000Research*, 14(1203). <https://doi.org/10.12688/f1000research.172211.2>
- Alfaro-Urrutia, J. E., & Pérez-Godoy, P. (2025). Curricular integration of augmentative and alternative communication for students on the autism spectrum in inclusive-oriented schools: A scoping review. *Autism*, 29(10), 2395–2411. <https://doi.org/10.1177/13623613251333834>
- Bipath, K., Tebekana, J., & Venketsamy, R. (2021). Leadership in implementing inclusive education policy in early childhood education. *Education Sciences*, 11(12), 815. <https://doi.org/10.3390/educsci11120815>
- Çevik, M. N. (2025). The relationship between inclusive leadership in sustainable education and teachers' subjective wellbeing in Türkiye: The mediating role of affective commitment. *Frontiers in Psychology*, 16, Article 1689020. <https://doi.org/10.3389/fpsyg.2025.1689020>
- Chandipwisa, C., Shimilimo, A., Uwishema, O., & Onyeaka, H. (2026). The current landscape and future prospects of vaccine manufacturing in Africa: Challenges, innovations, and opportunities: A narrative review. *Health Science Reports*, 9(3), e71926. <https://doi.org/10.1002/hsr2.71926>
- Crisol-Moya, E., Romero-López, M. A., Burgos-García, A., & Sánchez-Hernández, Y. (2022). Inclusive leadership from the family perspective in compulsory education. *Journal of New Approaches in Educational Research*, 11, 2645-245. <https://doi.org/10.7821/naer.2022.7.937>
- Cruz, J., Azevedo, H., Carvalho, M., & Fonseca, H. (2023). From policies to practices: Factors related to the use of inclusive practices in Portugal. *European Journal of Investigation in Health, Psychology and Education*, 13(10), 2238–2250. <https://doi.org/10.3390/ejihpe13100158>
- Dang, H. T., Tran, T. A., Truong, N. N. V., Luong, H. M., & Nguyen, H. Q. (2025). Knowledge and attitudes of dental students on e-portfolios as a tool for learning, assessment, and professional development in dental education. *Cureus*, 17(4), e81980. <https://doi.org/10.7759/cureus.81980>
- Dionne, C., Paquet, A., Lemire, C., et al. (2025). Supporting the inclusion of young children through professional development. *Frontiers in Education*, 10 <https://doi.org/10.3389/feduc.2025.1535104>
- Ghamrawi, N. (2023). Toward agenda 2030 in education: Policies and practices for effective school leadership. *Educational Research for Policy and Practice*, 22(2), 325–347. <https://doi.org/10.1007/s10671-023-09341-8>

- Hasselgren, C., Dellve, L., & Gillberg, G. (2021). Conditions for distributed leadership practices among managers in elder- and disability care organizations: A structural equation modeling approach. *International Journal of Nursing Studies Advances*, <https://doi.org/10.1016/j.ijnsa.2021.100049>.
- Hassett, J., Spencer, L., Hewat, S., Wales, K., & Webb, G. (2024). Collaborative approaches with stakeholders in speech-language pathology: Narrative literature review. *International Journal of Language & Communication Disorders*, 59(6), 2911–2925. <https://doi.org/10.1111/1460-6984.13123>
- Hejazi, M. E., Alizadeh-Dizaj, G., Khoshshirat, S., Raoofi, S., & Javan Biparva, A. (2026). Exploring collaborative strategies to improve patient safety in healthcare organizations: A qualitative study. *Plos ONE*, 21(1), e0341022. <https://doi.org/10.1371/journal.pone.0341022>
- Hikmat, R., Yosep, I., Mardhiyah, A., Kurniawan, K., & Syabana, M. N. (2025). A scoping review of school-based psychological interventions for adolescent mental health in secondary education: Addressing anxiety, depression, and well-being. *Discover Mental Health*, 6(1), Article 11. <https://doi.org/10.1007/s44192-025-00336-w>.
- Kristjansdottir, G., Hallström, I. K., & Vilhjalmsson, R. (2020). Sociodemographic and health status predictors of parental role strain: A general population study. *Scandinavian Journal of Public Health*, 48(5), 519–526. <https://doi.org/10.1177/1403494819846361>
- Malhotra, K. P. (2025). Whose IDEA is this? An examination of the effectiveness of inclusive education. *Educational Evaluation and Policy Analysis*, 47(4), 1045–1070. <https://doi.org/10.3102/01623737241257951>
- Nteropoulou-Nterou, E., & Gelastopoulou, M. (2026). The individualized education program in early childhood education: improving inclusive practices through action research. *Educational Action Research*, 34(1), 21–40. <https://doi.org/10.1080/09650792.2025.2488429>
- Pratiwi, H., Noor Haida, R., & Aziza, A. (2025). Assessing inclusivity in early childhood education. *Education 3–13*. <https://doi.org/10.1080/03004279.2025.2486726>
- Rad, D., Redeş, A., Roman, A., Ignat, S., Lile, R., Demeter, E., ... & Rad, G. (2022). Pathways to inclusive and equitable quality early childhood education for achieving SDG4 goal—a scoping review. *Frontiers in psychology*, 13, 955833. <https://doi.org/10.3389/fpsyg.2022.955833>
- Rasmani, U. E. E., Widiastuti, Y. K. W., Wahyuningsih, S., Nurjanah, N. E., Zuhro, N. S., Fitrianingtyas, A., & Winarji, B. (2025). The Urgency of Educational Management Training to Foster Teachers' Teaching Skills: Learn from Early Childhood Education (ECE) in Surakarta. *International Journal of Learning, Teaching and Educational Research*, 24(1), 152–171. <https://doi.org/10.26803/ijlter.24.1.8>
- Wang, H., Ye, Y., Liao, X., Li, Z., & Liang, Y. (2022). A study on maker teaching activity design in senior high school general technology course for creativity cultivation. *Frontiers in Psychology*, 13, Article 886051. <https://doi.org/10.3389/fpsyg.2022.886051>
- Whitaker, A. A., Yoo, P. Y., Vandell, D. L., Duncan, G. J., & Burchinal, M. (2023). Predicting adolescent and young adult outcomes from emotional support and cognitive stimulation offered by preschool-age home and early care and education settings. *Developmental Psychology*, 59(12), 2189–2203. <https://doi.org/10.1037/dev0001576>.
- Woods, P. (2021). Process philosophy: Organizing mentalities for glimpsing pharmacy practice “in flight”. *Research in Social and Administrative Pharmacy*, 17(12), 2082–2088. <https://doi.org/10.1016/j.sapharm.2021.04.009>
- Wu, P.-F. R. (2025). A national study on teacher beliefs and practices in inclusive preschool education in Taiwan. *International Journal of Developmental Disabilities*, 71(6), 852–866. <https://doi.org/10.1080/20473869.2025.2545954>