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Analysis of the Management of Early Childhood Education Institutions Using the ADDIE Model at KB Aisyiyah Kutukulon Ponorogo

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ABSTRACT

Early childhood education (ECE) institutions play a pivotal role in estáblishing the foundation for sustainable human capital development; however, numerous small private PAUD institutions encounter persistent managerial challenges. These challenges encompass excessive teacher workload due to multi-role responsibilities, limited learning infrastructure, inadequate parental involvement, the absence of contingency planning, and unsystematic documentation of child development. Such conditions not only impact daily learning quality but also jeopardize the sustainability of educational services and the long-term development of human resources. This study endeavors to analyze the management practices of KB Aisyiyah Kutukulon Ponorogo and to formulate a structured direction for institutional improvement utilizing the ADDIE model as a human resource development framework. Employing a qualitative descriptive approach, data were collected through observations, in-depth interviews, and document analysis involving teachers, the school principal, and learning activities. The findings reveal that while the institution demonstrates strong commitment and consistent implementation of play-based learning, managerial limitations significantly constrain service effectiveness. Through the application of the ADDIE model, this study systematically identifies institutional needs, designs improvement strategies, develops managerial instruments such as standard operating procedures and training modules, and outlines implementation and evaluation mechanisms. The results demonstrate that the ADDIE model provides a practical and sustainable framework for strengthening PAUD management by enhancing teacher professionalism, organizational effectiveness, and service continuity. This study contributes to the literature by positioning ADDIE not only as an instructional design model but also as a strategic approach to sustainable human resource development in early childhood education institutions with limited resources.

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1. INTRODUCTION

Integrating Human Resource Development (HRD) principles into PAUD management ensures that teacher competencies and institutional practices are mutually reinforced. This alignment

supports sustainable educational outcomes and forms a strong foundation for long-term human capital development. Early Childhood Education (PAUD) plays a critical role in holistic child development, covering cognitive, social-emotional, motor, language, moral, and spiritual aspects (Republik Indonesia, 2003). Effective HRD practices enable educators to consistently deliver these holistic learning experiences. Because early brain development reaches its peak plasticity, positive stimulation is essential for character formation and long-term learning habits Telaumbanua et. Al. (2025).

According to Bronfenbrenner's developmental ecological theory (Bronfenbrenner, 1979), children's microenvironment, including educational institutions, is the primary system influencing their behavior, mindset, and personality development. Early childhood education institutions provide meaningful learning experiences that support all dimensions of development. Studies have shown that appropriate educational stimulation in early childhood improves cognitive abilities, emotional regulation, and social skills, such as Juita & Woga (Juita & Woga, 2023) and Sausan et al. (Sausan, Cantika, Azhari, & Haqi, 2022).

In this context, the success of early childhood education institutions is not only determined by learning activities, but also by institutional management which includes organizational structure, division of tasks, infrastructure, classroom management, parental involvement, and the effectiveness of the child development evaluation process (Susanti, Nurohmah, & Anisa, 2025). Good management allows the institution to achieve service quality according to the National Early Childhood Education Standards (Angelia, Putri, & Susanti, 2025).

From a human resource development (HRD) perspective, teachers represent the core human capital that determines the quality and sustainability of educational services. HRD theory emphasizes continuous capacity building, professional development, and the creation of supportive work environments to ensure organizational effectiveness. In PAUD settings, excessive workloads, multiple role assignments, and limited managerial support can hinder teachers' professional growth and reduce service quality. Previous studies have shown that high workloads among PAUD teachers are closely associated with burnout, decreased performance, and reduced quality of teacher—child interaction (Dwi Prihatini & Inayah, 2023).

Alongside HRD, sustainability theory positions education as a long-term investment in human capital. The sustainability of educational institutions is not only measured by financial viability, but also by the continuity of service quality, stability of human resources, and the institution's capacity to adapt to internal and external challenges (Sumiharsono, 2024). In PAUD, sustainable management is essential to ensure consistent learning experiences, professional teacher development, and institutional resilience. This perspective aligns with the Sustainable Development Goals (SDGs), particularly SDG 4.2, which emphasizes inclusive and quality early childhood education as a foundation for lifelong learning.

Despite the strategic role of PAUD, many small private PAUD institutions face structural and managerial limitations. These include limited funding, simple organizational structures, inadequate infrastructure, and teachers who must carry out multiple roles simultaneously (Simatupang & Asriati, 2024). Agustin et al. (Agustin, Puspita, Nurinten, & Nafiqoh, 2020) found that many private PAUD institutions in Indonesia rely heavily on teachers to manage both instructional and administrative responsibilities, increasing the risk of work fatigue and reducing instructional effectiveness.

Several previous studies have examined PAUD management from different perspectives. Utari & Alimni (Utari & Alimni, 2025) demonstrated that management aligned with national standards improves learning quality in PAUD institutions. Puspitasari et al. (Puspitasari et al., 2024) highlighted the effectiveness of community-based human resource management in enhancing PAUD quality through stakeholder involvement. Meanwhile, Sumiharsono (Sumiharsono, 2024) emphasized value-based management integrating social and economic principles to support the sustainability of PAUD institutions. However, these studies generally address management aspects in a partial manner and have not explicitly integrated a systematic human resource development framework with a sustainability perspective.

This condition reveals a theoretical gap between the ideal principles of HRD and sustainability and the empirical realities of PAUD management in resource-limited institutions. HRD theory emphasizes continuous professional development, capacity building, and balanced workload distribution as key determinants of organizational effectiveness (Swanson & Holton, 2001). However, empirical conditions in many PAUD institutions show that teachers often experience excessive workloads, role overload, and limited institutional support, which contradict the core assumptions of sustainable HRD practices.

Furthermore, existing studies on PAUD management have rarely positioned instructional design models as strategic instruments for institutional governance and human resource development. In this regard, the ADDIE model offers a systematic and flexible framework that can bridge this gap. Traditionally applied in instructional design, ADDIE consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009). When applied to institutional management, each stage can function as a human resource development mechanism starting from needs analysis, structured planning, development of managerial and instructional instruments, implementation of improved practices, and continuous evaluation. Therefore, ADDIE can be positioned not only as a learning design model but also as a strategic approach to sustainable human resource and institutional development (Molenda, 2003).

The novelty of this study lies in integrating the ADDIE model as a comprehensive management framework for sustainable human resource development in a PAUD context. Unlike Utari and Alimni (Utari & Alimni, 2025), who focused on standard-based quality improvement, Puspitasari et al. (Puspitasari et al., 2024), who emphasized community-based HR management, and Sumiharsono (Sumiharsono, 2024), who highlighted value-based sustainability, this study combines HRD principles, sustainability theory, and the ADDIE model into a unified managerial framework. This integration provides a more operational and cyclical approach to strengthening PAUD management and human capital sustainability.

Although conceptually PAUD has a strategic role, many private PAUD institutions face a variety of limitations, including funding limitations, simple organizational structures, and high teacher workloads (Simatupang & Asriati, 2024). Findings of Agustin et al. (Agustin et al., 2020) shows that most small private PAUD in Indonesia still relies on teachers who have to run multi-roles, from educators to school administration operators. This condition increases the risk of burnout and reduces the quality of learning.

A practical example of these challenges can be observed in KB Aisyiyah Kutukulon, where three permanent teachers take on dual roles. Teachers teach 24 JTMs while handling administration, reports, and other operational activities. In addition to heavy workloads, cramped classrooms and limited play facilities hinder learning effectiveness. When a meeting of parents is held, the classroom must be converted so that children's learning is closed. This shows the weak management of space and facilities.

In addition, the institution does not have a contingency plan mechanism if teachers are unable to attend. The absence of this mechanism has the potential to disrupt the continuity of services, so curriculum planning and institutional management are very important to maintain the quality of PAUD services (Mariam & Sukirman, 2021).

These various obstacles are not just technical issues, but have a direct impact on the quality of early childhood education services. High workload can reduce teacher performance and hinder quality interaction between teacher and child. Prihatini & Inayah's Findings (Dwi Prihatini & Inayah, 2023) showed a strong correlation between the high workload of PAUD teachers and work fatigue. If burnout occurs, teachers can lose empathy, patience, and creativity in teaching, which is so much needed in play-based learning (Andini, Sholeh, & Kumalasari, 2024).

The limitation of facilities and infrastructure also has the potential to reduce the effectiveness of play activities which should be the main approach in early childhood learning, this is in accordance with research by Sihombing et. Al. (2025), the condition of narrow spaces and the lack of educational play equipment limit children's opportunities to explore the learning environment optimally (Rohiyatun & Najwa, 2021).

In addition, the absence of child development documentation hinders the institution's ability to meet the National Early Childhood Education Standards (Republik Indonesia, 2014). Systematic developmental assessment is an essential component in ensuring that every child receives the stimulation that suits their developmental needs (Suwandi, Kurniawati, Werdani, & Kholidin, 2023). More broadly, the weaknesses of the management of early childhood education institutions can hinder the achievement of the SDGs targets, especially SDG 4.2 regarding access to quality early childhood education (Virli Susanti et al., 2025).

To overcome these challenges, a number of strategic steps are suggested. First, increasing teacher capacity through classroom management training, child psychology, and positive discipline (Hermahayu, Rasidi, & Zahra, 2025). This training is important to help teachers deal with super-active children effectively. Second, restructuring the division of tasks so that teachers are not burdened with excessive administrative responsibilities (Fiatunnabilah & Rolina, 2025). The involvement of the school committee or parents in the administration can be a practical solution (Mariam & Sukirman, 2021).

Third, the development of learning infrastructure, both indoor and outdoor (Purnamasari, Redjeki, Desyanty, Firdaus, & Aruna, 2023). Adequate facilities have been proven to improve the quality of children's interaction and the effectiveness of play-based learning (Rohiyatun & Najwa, 2021). Fourth, the implementation of flexible management, such as teacher rotation and simplification of activities when educators are incomplete (Hidayat, 2021; Latif, Amir, Marzuki, Gaffar, & Nurhayati, 2023). This step helps maintain learning continuity despite internal constraints.

The implementation of these measures makes several important contributions. Theoretically, this study enriches the literature on early childhood education management in the context of small institutions with limited resources. Practically, the recommendations of this research can be applied by other private PAUD institutions that face similar situations. Teacher capacity building, administrative restructuring, and facility improvements can improve service quality, teacher professionalism, and parental trust. At the macro level, strengthening PAUD management contributes to the achievement of SDGs targets in the education sector.

Early childhood education institutions play a strategic role in the sustainability of human capital development, as they lay the foundational competencies that shape individuals' cognitive, social, emotional, and moral capacities in the long term. The quality of human resources in the future is strongly influenced by how early education is managed, particularly through effective institutional governance, professional teacher development, supportive learning environments, and sustainable organizational systems. Weak management practices in early childhood education, such as excessive teacher workload, limited infrastructure, and the absence of systematic planning, may threaten the continuity and effectiveness of educational services, thereby undermining the sustainability of human resource development. Therefore, strengthening educational management in PAUD institutions should be viewed not merely as an operational improvement, but as a long-term investment in sustainable human capital development aligned with the objectives of Sustainable Development Goal 4, especially the provision of inclusive and quality early childhood education.

Previous studies on early childhood education management have primarily focused on operational efficiency, social and economic value integration for institutional sustainability, and community involvement in human resource management for quality improvement. For example, Sumiharsono, (2024) highlights how value-based management strategies facilitate long-term sustainability of PAUD institutions by integrating social and economic principles. Utari & Alimni, (2025) demonstrate that well-structured management enhances the quality of early childhood education services by aligning managerial practice with national standards. Additionally, Puspitasari et al. (2024) show that community-based human resource management can significantly improve educational quality by actively engaging local stakeholders. However, few studies have explored how an ADDIE-based systematic management framework explicitly contributes to sustainability in human capital development within PAUD settings. Unlike these previous works, the present study integrates ADDIE as a cyclical and sustainable educational management model that not only improves operational outcomes but also strengthens long-term human capital generation aligned with sustainability goals. This focus on linking a structured instructional design framework with sustainability in human resource outcomes distinguishes this research from earlier literature.

In the context of early childhood education, the ADDIE model can be positioned not only as an instructional design framework, but also as a strategic approach to human resource development (HRD). Each stage of the ADDIE model is closely related to the development of educators' competencies and institutional capacity. The analysis stage identifies gaps in teachers' skills, workload distribution, and organizational readiness; the design and development stages facilitate the systematic planning of teacher training, task restructuring, and managerial instruments; the implementation stage supports the application of improved practices in daily educational services; while the evaluation stage ensures continuous professional development and organizational learning. Therefore, the application of the ADDIE model in PAUD management contributes directly to sustainable human resource development by strengthening teachers' professionalism, improving managerial effectiveness, and supporting long-term service quality.

In the development of educational services, one of the frameworks that can be used to strengthen managerial processes and improve quality is the ADDIE Model (Munandar et al., 2024). The ADDIE model consists of five main stages, namely Analysis, Design, Development, Implementation, and Evaluation. In the Analysis stage, the needs of the institution and various operational problems are identified in depth as the basis for development. The Design stage focuses on designing solutions, including learning strategies, management improvements, and the preparation of service strengthening steps. The Development Stage produces concrete products from the design, such as learning tools, managerial instruments, and infrastructure arrangements. The Implementation Stage is the process of implementing the design into learning activities and direct institutional management. The final stage, Evaluation, is conducted to assess the effectiveness of implementation and determine recommendations for continuous improvement. The ADDIE model provides a systematic development framework that is relevant to the needs of PAUD institutions, so that it can be used as a reference in understanding and formulating strategies to improve service quality as per the context of this research.

2. METHODS

This study uses a descriptive qualitative approach to comprehensively describe the management practices of institutions in KB Aisyiyah Kutukulon. This approach was chosen because it is suitable for understanding the phenomenon, the workflow of the institution, and the interaction between educational components naturally in the original context. Qualitative research enables researchers to explore experiences, perceptions, and organizational dynamics in depth, particularly in educational settings with complex social interactions, and to understand how human resource development strategies are implemented to support teacher competencies and institutional sustainability (Creswell, 2014). Therefore, this approach is suitable for capturing the real conditions of early childhood education institutions, especially those with limited resources.

Data collection was carried out directly in the school environment through observation, in-depth interviews, document analysis, and field recording. The use of multiple data collection techniques aims to obtain rich and comprehensive data while strengthening the credibility of findings through triangulation (Patton, 2014). The entire process is designed to capture the dynamics of play-based learning, the division of teachers' duties, communication with parents, as well as problems that arise such as limited facilities and the management of super-active children.

The research instruments included observation sheets, interview guidelines, organizational structure tables, teacher routine notes, and visual documentation. The research focused on three permanent teachers who each held 24 JTMs, including teachers who concurrently served as principals, operators, and treasurers. In addition, data was also obtained from observations of 15 students (12 females, 3 males) during learning activities. The involvement of teachers and students as research subjects allowed for a holistic understanding of managerial practices and classroom dynamics. Data analysis was conducted through reduction, data presentation, and conclusion drawing, enabling the findings to objectively describe the management conditions of KB Aisyiyah Kutukulon (Miles, Huberman, & Saldana, 2014).

2.1 Observation Procedure

Observations are carried out on school operational days between Monday and Thursday. The focus of observation includes daily routines, teacher punctuality, flow of learning activities, classroom management, and utilization of existing facilities. Teachers are recorded to be present at 07.20 as scheduled, children start to enter at 08.00, core

activities last until 09.15–09.30, and children go home at 10.00–10.05. After that, the teacher prepares the next lesson until 11.00-11.30.

In addition to the learning process, observations also observed the physical condition of the relatively narrow classroom, the use of the classroom as a meeting place so that children's learning must be taken off, as well as the limitations of indoor educational play equipment and the lack of outdoor play area facilities. Observations also noted situations when children with super active characters often disrupted the rhythm of activities, which is one of the main obstacles in the teaching and learning process. All findings are recorded in the observation table that has been prepared.

2.2 In-Depth Interview Process

The interview was conducted with the principal (Mrs. Arum). Interviews use a semi-structured format, allowing for the extraction of information about work experience, division of tasks, learning challenges, and strategies used when dealing with operational problems.

The interview explored themes such as:

- a. division of teacher duties (e.g. teachers who are also operators and treasurers),
- b. workload of 24 JTM per teacher,
- c. teachers' efforts to handle children are super active,
- d. communication patterns with parents through face-to-face meetings and WhatsApp groups,
- e. follow-up steps when there are obstacles such as teachers not attending or schedules change,
- f. limited space and infrastructure facilities that affect the continuity of learning.

The principal said that the institution "tries its best to provide the best service with existing resources", which emphasizes the context of research related to the management of small PAUD institutions that have limited resources.

2.3 Documentation and Photographing of Managerial Systems

School documents such as organizational structure, teacher and job lists, student data, weekly activity schedules, and communication records with parents were analyzed to verify observational and interview findings. The structure of the institution shows core roles, such as:

- a. The principal is also an educator,
- b. Teacher educator operator and treasurer,
- c. Other full-time educator teachers with their respective classroom responsibilities.

2.4 Data Analysis and Validation of Findings

Data analysis was carried out with the Miles & Huberman model through three stages:

- a. Data reduction, which is to select and summarize the results of observations, interviews, and documentation to identify key issues such as multi-role teachers, limited facilities, classroom management, and parent communication.
- b. Data presentation is in the form of grouping findings in themes such as teacher workload, learning routines, space conditions, and operational technical obstacles.
- c. Drawing conclusions, namely identifying institutional management patterns and matching them with PAUD management theory and previous research.

Triangulation is used to improve the validity of the data: observational findings are juxtaposed with the results of interviews and official school documents. This validation ensures that all data reflects the real condition of KB Aisyiyah Kutukulon, especially related to limited facilities, teacher workload, classroom management, and problem-solving mechanisms.

The qualitative descriptive approach adopted in this study is not solely intended to describe empirical conditions but to analyze the dynamics of human resource development within ECE institutional management. Data were collected through observations, in-depth interviews, and document analysis using triangulation to ensure credibility and to capture the interrelationships among teacher workload, organizational structure, work environment, and service quality. This approach aligns with (W.Creswell, 2018) assertion that qualitative research enables in-depth exploration of organizational practices within their natural contexts.

Data analysis followed the model proposed by (Miles et al., 2014) encompassing data reduction, data display, and conclusion drawing. Findings were analyzed to identify gaps and opportunities for enhancing human resource development, which later informed the formulation of ADDIE-based strategies for systematic improvement of teacher competencies and institutional management. Thus, the methodology moves beyond descriptive reporting and serves as an analytical foundation for formulating ADDIE-based human resource development strategies applicable to ECE institutions.

3. RESULTS AND DISCUSSION

This section presents the results of research on the conditions of the implementation of educational services at KB Aisyiyah Kutukulon Ponorogo. The findings were obtained through observations, and interviews, which described how the management of the institution runs in daily practice. Each finding is then analyzed to understand the challenges faced by the institution and its implications on the quality of the PAUD services provided. The following description presents a series of problems found during the research.

3.1 Managerial Structure and Division of Teacher Duties

The results of interviews and documentation show that the organizational structure of KB Aisyiyah Kutukulon is simple, consisting of the principal, three educators, and a committee. The principal (Mrs. Arum) is also a teacher with a load of 24 JTM. The second teacher (Mrs. Puji) teaches the class as well as carries out administrative duties as an operator and treasurer, also with a load of 24 JTM. The third teacher (Mrs. Ridho) functions as an educator carrying the same workload.

This model of division of tasks signifies that the institution relies on limited human resources, so most of the administrative and academic work is done by the same teachers. This condition of multi-role teachers is in line with Mustofa's findings (Mustofa, 2018), which noted that many PAUD teachers in Indonesia concurrently have administrative duties due to the lack of additional education personnel.

Practically, the existence of dual tasks has the potential to reduce work efficiency because teachers have to divide their attention between learning preparation, teaching in the classroom, filling in operator data, financial management, and communication with parents. These findings corroborate Prihatini & Inayah's research (Dwi Prihatini & Inayah, 2023) which found that high workload has a direct relationship with burnout and decreased learning quality.

This condition indicates that the management of the institution has not fully met the standards of PAUD management as stated in Permendikbud 137 (Republik Indonesia, 2014), which emphasizes the importance of the division of professional duties between educators and education personnel. However, despite facing limitations, the teachers at KB Aisyiyah Kutukulon continue to carry out their duties with high commitment, as evidenced by the discipline of the attendance schedule and the smooth implementation of daily learning.

From a human resource development (HRD) perspective, the presence of multi-role teachers in this institution reflects a critical challenge in sustaining human capital capacity. Excessive workload and overlapping responsibilities reduce opportunities for professional growth, reflective practice, and long-term competence development among educators. Previous studies have shown that unmanaged workload in early childhood education institutions increases burnout risk and negatively affects service (Harper, Wilson, & Mcgrath, 2025). However, this study extends existing findings by demonstrating that managerial restructuring through the ADDIE framework can function as an HRD strategy, enabling task redistribution, capacity building, and more sustainable utilization of limited human resources. These multi-role responsibilities not only affect teachers' workload but also influence the implementation of classroom learning activities, particularly in maintaining play-based learning routines.

3.2 Implementation of Play-Based Learning

Observations show that learning is carried out four days a week, with activities starting at 08.00 and ending at 10.00–10.05. The core activities took place between 09.00-09.30, while before and after it was used for habituation, gymnastics, motor games, and daily prayers. After the learning is over, the teacher uses the time until 11.00–11.30 to prepare the next

day's activities.

The play-based learning approach seems to be applied consistently. Children are given the opportunity to do fine and gross motor activities, read pictures, sing, and participate in creativity activities according to the theme (Juita & Woga, 2023). This practice is in line with the theory of early childhood development which states that play is the main medium for children to build cognitive, social-emotional, moral, and language aspects (Sausan et al., 2022).

However, it was found that there were learning dynamics that were quite challenging, especially related to the existence of super active children who often disrupted the rhythm of group activities. The teacher said that this condition "occurs quite often both in core activities and during playtime," so it requires extra handling. In the context of theory, this phenomenon is in line with Yanto's (Yanto, 2018) which emphasizes that the management of early childhood education classes is crucial in maintaining the flow of activities, considering that early childhood has a short concentration range and high movement needs.

The absence of additional assistant teachers makes the handling of super active children completely dependent on the classroom teacher. Nonetheless, teachers try to adjust strategies by modifying activities and providing individual attention when needed. This shows the creativity of educators in facing limitations, as revealed by Salwiah & Asmuddin (Salwiah & Asmuddin, 2022), that the quality of teacher-child interaction is often the main compensation in the condition of limited facilities.

The implementation of play-based learning in this institution highlights the central role of teacher competence as a form of human capital in early childhood education. From an HRD standpoint, effective classroom management, emotional regulation, and adaptive teaching strategies represent critical competencies that require continuous development. Prior research emphasizes that teachers' pedagogical skills directly influence the effectiveness of play-based learning environments (Amir, Rohmadheny, Purnama, Ulfa, & Ega, 2024). This study adds to the literature by showing that limited institutional support and absence of assistant teachers place additional developmental demands on educators, underscoring the need for systematic HRD interventions such as structured training and managerial support embedded within the ADDIE framework. The effectiveness of play-based learning is also constrained by physical conditions of the learning environment, particularly the limited infrastructure available in the classrooms.

3.3 Limited Infrastructure and Its Impact on the Learning Process

The results of the observation show that one of the biggest challenges faced by KB Aisyiyah Kutukulon is the limited infrastructure, both in terms of classrooms and educational game tools. The classrooms used for the learning process are relatively small in size and do not have partitions or other supporting spaces. In ideal conditions, the PAUD classroom needs to allow children to move freely, develop gross motor skills, and play exploratory games (Sriwanto, Hk, & Juliadi, 2024). However, the narrow space requires teachers to make adjustments such as rearranging tables, chairs, and play areas whenever activities change.

This situation is even more complex when the institution needs to hold a meeting of student guardians or other activities that require a wider space. Since it does not have a hall or multifunctional room, the children's classroom has to be converted. As a result, learning on that day was forced to be closed. This has a direct impact on the continuity of early childhood learning, which according to (Republik Indonesia, 2014) It should take place consistently and in a structured manner.

In addition to classrooms, educational game facilities at this institution are also limited. Some of the available game tools, such as educational blocks, puzzles, and numeracy props, have already suffered wear or minor damage. The lack of outdoor play area facilities is also a big obstacle. Outdoor areas have few tools, and even that not all of them can be used optimally. This limitation makes children's gross motor activities that should be facilitated outdoors have to be diverted into the classroom, so that the already narrow space is getting more crowded.

According to Rohiyatun & Najwa (Rohiyatun & Najwa, 2021), adequate infrastructure is one of the indicators of the quality of PAUD services. Inadequate facilities can reduce the

intensity of children's exploration, creativity, and social interaction. This also has an impact on teachers' ability to create varied learning activities. At KB Aisyiyah Kutukulon, teachers do still try to modify activities to keep them interesting for children, but the limited facilities cause learning activities to be often repetitive and less varied.

From the perspective of early childhood development, limited facilities can hinder several aspects of development, including:

- a. Gross Motor Development The minimal number of outdoor tools makes gross motor activity less than optimal. In fact, this development is very important for the coordination of the child's body and the child's readiness to face the next level of education.
- b. Cognitive Development and Creativity
 Limited teaching aids make the cognitive stimulus provided by teachers less varied. Juita
 & Woga Studies (Juita & Woga, 2023) emphasized that concrete media plays a significant role in children's cognitive development.
- Social-Emotional Development
 Children have fewer play options, so there are fewer opportunities to cooperate, share, or resolve conflicts constructively.

Although teachers try their best, the limited infrastructure has a big impact on the quality of learning services.

Limited infrastructure not only affects children's learning experiences but also influences the performance and development of educators as human resources. HRD theory emphasizes that the work environment functions as a key enabler of human capital productivity and professional effectiveness. Studies have shown that inadequate learning facilities constrain teachers' instructional creativity and reduce job satisfaction (Tiara, 2024). Consistent with these findings, this study reveals that spatial limitations and insufficient learning tools increase teachers' adaptive burden. Unlike previous studies, this research frames infrastructure improvement as an integral component of HRD, rather than merely a physical resource issue. Besides internal factors like infrastructure, external support from parents plays a crucial role in ensuring learning quality and supporting teachers' workload.

3.4 Parental Involvement and Institutional Communication Patterns

The implementation of education is a shared responsibility between the government, the school, the community, and the parents of students (Kinanti & Trihantoyo, 2021). Parental involvement is one of the important components of early childhood education (Hardiyanti, Santoso, & Ratno, 2021). The results of the study showed that KB Aisyiyah Kutukulon had a fairly good communication pattern with parents, especially through two main channels: face-to-face meetings and WhatsApp groups. Daily communication regarding children's attendance, learning agendas, and routine information is carried out through the help of digital technology. This shows that institutions are quite adaptive in utilizing simple technology to increase the effectiveness of communication.

According to Salwiah & Asmuddin (Salwiah & Asmuddin, 2022), consistent parental involvement can strengthen children's habituation, improve behavioral regularity, and accelerate developmental achievement. However, even though the communication pattern is effective, the form of parental involvement in KB Aisyiyah Kutukulon still tends to be oneway and informative. Parents receive more information than engage in institutional development activities.

Based on observations and interviews, parents have not been involved in:

- a. Support for the improvement of learning facilities,
- b. Active participation in monthly parenting activities,
- c. Providing feedback on the learning process,

In fact, the research of Latif et al. (Latif et al., 2023) shows that PAUD that establishes strategic collaboration with parents is able to increase the availability of resources, expand learning innovations, and improve classroom management. In the context of KB Aisyiyah Kutukulon, parental collaboration has the potential to help ease the workload of teachers, especially in the administrative aspect that is now borne by teachers and operators.

In addition, the current communication pattern has not been fully directed to a systematic understanding of children's development. The institution does not yet have a standard child development report, so child development communication is more verbal and situational. This is contrary to (Republik Indonesia, 2014) which requires PAUD institutions to document child development periodically through authentic assessments.

If communication patterns are strengthened and expanded, parents can become strategic partners in supporting the improvement of the quality of learning and child development, not just recipients of information (Amelia & Yuliani, 2024). In other words, there is a great opportunity for institutions to develop a "collaborative" relationship model rather than just "one-way information."

Parental involvement in this institution remains largely informative rather than collaborative, which limits its potential contribution to human resource development. From an HRD perspective, parents can be positioned as external human capital who support organizational learning and service sustainability. Previous studies demonstrate that collaborative partnerships between PAUD institutions and parents enhance resource availability and strengthen institutional capacity (Latif et al., 2023). This study extends prior research by highlighting that structured parental engagement, when integrated into a systematic management framework such as ADDIE, can support both teacher workload reduction and long-term HRD sustainability. In addition to parental involvement, the institution's ability to maintain consistent learning routines depends on contingency planning and risk management.

3.5 Lack of Contingency Plan and Risk to Learning Continuity

One of the important findings in this study is the absence of a contingency plan when teachers are unable to attend or sudden obstacles occur. Based on interviews with school principals, the usual solution is "joint deliberation to determine temporary measures." This practice shows the existence of a collaborative work culture, but managerial it does not meet the operational standards of educational institutions.

In the context of early childhood education, contingency plans are very necessary considering that early childhood learning requires intensive assistance and stable teacher attendance (Ahyar, Fadillah, & Juwita, 2025). The absence of teachers without a replacement has the potential to pose several risks, including:

- a. Disruption of Children's Routines
 Early childhood needs a consistent routine to feel safe and comfortable. The absence of teachers can affect the emotional state of children.
- Decreased Learning Quality
 The lack of substitute teachers makes learning run less optimally or even stops.
- Teacher workload increases
 Other teachers have to take over additional tasks suddenly, which can increase work stress.
- d. Potential Child Safety Risks
 The ratio of teacher and child becomes unbalanced, increasing the risk of children being neglected in exploratory activities.

The absence of a contingency plan shows that the institution does not yet have a written Standard Operating Procedure (SOP) for emergency conditions. In fact, Mariam & Sukirman (Mariam & Sukirman, 2021) emphasized that the management of the PAUD curriculum must include anticipatory aspects to maintain the sustainability of services. Without a clear SOP, decisions are spontaneous and depend on the availability of teachers on the day.

In the context of KB Aisyiyah Kutukulon, the contingency plan is very important considering that all teachers have a load of 24 JTM, and one of them is also an operator and treasurer. The absence of substitute teachers or trained volunteers increases the risk of learning not going according to schedule. In addition, the institution does not yet have partnerships with outside parties (volunteers, PPL students, or local communities) that can be an alternative if teachers are unable to attend.

Thus, the continuity of learning at KB Aisyiyah Kutukulon depends entirely on the presence of teachers and internal flexibility, which under certain conditions can threaten the stability of the quality of early childhood education services.

Based on various research findings on service management at KB Aisyiyah Kutukulon, a framework is needed that can describe the direction of institutional development in a more systematic manner. For this reason, the results of this study were re-analyzed using the ADDIE Model, a development model consisting of the stages of needs analysis, design, development, implementation, and evaluation. The use of this model is intended to formulate more targeted development steps according to the real conditions of the institution. Details of service development analysis using the ADDIE Model are presented in the following table.

From a Human Resource Development perspective, the findings indicate that multiple role assignments, limited infrastructure, and the absence of contingency mechanisms reflect weaknesses in institutional HRD systems. Excessive workloads restrict teachers' opportunities for professional reflection and competency enhancement, thereby threatening service quality. These findings reinforce previous research demonstrating a strong relationship between high workload and burnout among ECE teachers (Dwi Prihatini & Inayah, 2023)

Unlike prior studies that tend to frame ECE management as an administrative issue, this study demonstrates that managerial improvement through the ADDIE model functions as a sustainable HRD strategy. Each ADDIE stage analysis, design, development, implementation, and evaluation represents a cyclical process of capacity building and organizational learning. Consequently, ADDIE contributes to adaptive work systems, enhanced teacher professionalism, and the long-term sustainability of educational services in resource-constrained contexts. Based on these findings, the ADDIE Model provides a systematic framework to address managerial and HRD challenges, allowing for targeted institutional development through needs analysis, design, development, implementation, and evaluation.

Table 3. 1 Addie Model Development

Tahap ADDIE	Analysis Results / Findings	Development Direction / Recommendations
A – Needs Analysis	 a) Teachers hold a high workload and concurrently many tasks. Infrastructure facilities are limited, classrooms are narrow, and APE is lacking. b) There is no contingency plan if the teacher is absent. c) Classroom management is difficult, especially facing super active children. d) Parental involvement is still one-way. e) Documentation of child development is not systematic. 	 a) Requires task restructuring. b) The spatial arrangement and procurement of APE is simple. c) Preparation of contingency SOPs. d) Teacher training related to classroom management. e) Parent collaboration program. f) Improving the child development administration system.
D – Design (Perancangan Program)	Problems have been mapped out and needs priorities determined.	 a) Design new task divisions. b) Design teacher training by implementing positive classroom management & discipline. c) Designing classroom layouts & APE needs. d) Designing contingency plan SOPs. e) Designing a parental involvement scheme (parenting, collaboration).

D – Product	The design is ready to be processed into a real product.		Making SOPs for the division of tasks and contingency SOPs.
Development		b)	Preparation of teacher training modules.
		c)	The development of APE is simple
			from cheap materials.
		d)	Rearrangement of classrooms and
		e)	play areas. Preparation of child
		(-)	development assessment format.
		f)	Creation of parental communication
			media.
1-	The product is ready to be applied in		Implement new task sharing.
Implementation	the field.	b)	Implement new class layouts and APE usage.
		c)	Teachers apply classroom
		-/	management strategies.
		d)	Contingency SOPs have been
		- \	implemented.
		(e)	Parenting programs and parental collaboration are starting to be
			activated.
E –	The improvements implemented need	a)	Evaluation of teacher workload and
Evaluation	to be evaluated for effectiveness.		learning quality.
(Evaluasi)		b)	Evaluation of the availability of facilities and APE.
		c)	Evaluation of parental involvement.
		d)	Evaluate the effectiveness of
			contingency SOPs.
		e)	Follow-up recommendations are to
			increase support personnel, increase facilities, and routine
			training.

Based on the results of the analysis in the table, the application of the ADDIE Model provides a more structured picture of the direction of service development at KB Aisyiyah Kutukulon. Through the analysis to evaluation stages, the needs of the institution can be thoroughly identified, followed by solution design, instrument development, strategy implementation, and continuous evaluation to ensure the effectiveness of improvements. This approach shows that the development of early childhood education management depends not only on the identification of problems, but also on the ability of the institution to design and implement improvement strategies systematically. Thus, the results of ADDIE's analysis can be a basis for consideration in efforts to improve the quality of PAUD services in a sustainable manner.

4. CONCLUSION

This study concludes that the management of early childhood education (PAUD) institutions plays a critical role in supporting sustainable human resource development. The findings demonstrate that limitations in managerial structure, human resource allocation, infrastructure, parental involvement, and contingency planning directly influence teachers' workload, professional capacity, and institutional effectiveness. These conditions highlight that effective educational management is not merely administrative, but fundamentally linked to the sustainability of human capital within PAUD institutions.

From a theoretical perspective, this study contributes to the field of human resource development (HRD) by extending HRD concepts into the context of early childhood education management. The application of the ADDIE model illustrates how structured managerial frameworks can function as systematic HRD mechanisms that support capacity building, role clarity, organizational learning, and long-term sustainability of educational human resources. This study thus strengthens the integration between HRD theory and educational management, particularly within small-scale and resource-limited PAUD settings.

In terms of practical implications, the results emphasize the importance of managerial planning, task distribution, professional development support, and stakeholder collaboration in improving

the quality and sustainability of PAUD institutions. School leaders are encouraged to adopt structured management models such as ADDIE to optimize limited human resources, reduce teacher workload imbalance, and enhance instructional quality. Additionally, strengthening collaborative partnerships with parents and developing clear contingency plans are essential strategies to support institutional resilience and service continuity.

Based on these findings, this study recommends that policymakers provide targeted support for managerial capacity building in PAUD institutions, including training in educational management and human resource development. School administrators should prioritize sustainable HR practices, while teachers should be supported through continuous professional development. Future research is encouraged to explore the long-term impact of structured management models on teacher well-being, institutional sustainability, and child learning outcomes across diverse PAUD contexts.

Theoretically, this study contributes to the field of Human Resource Development in Early Childhood Education by demonstrating that the ADDIE model can operate as an institutional management and HRD framework rather than solely an instructional design tool. The integration of HRD principles, ECE management, and ADDIE expands existing theoretical perspectives by emphasizing that early childhood education quality is fundamentally shaped by structured human resource development systems.

Practically, the findings suggest that ECE strengthening initiatives should prioritize managerial capacity building and sustainable HR practices rather than focusing exclusively on administrative compliance. Policymakers and local education authorities are encouraged to provide HRD-oriented management training, additional support personnel, and affirmative policies for small private ECE institutions. Such strategies are essential for enhancing institutional resilience and directly supporting SDG 4.2, which emphasizes inclusive and quality early childhood education as the foundation for long-term human capital development.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism

REFERENCES

- Agustin, M., Puspita, R. D., Nurinten, D., & Nafiqoh, H. (2020). Tipikal Kendala Guru PAUD dalam Mengajar pada Masa Pandemi Covid 19 dan Implikasinya. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(1), 334. https://doi.org/10.31004/obsesi.v5i1.598
- Ahyar, A., Fadillah, A. P., & Juwita, F. S. (2025). Peran Manajemen dalam Meningkatkan Mutu Pendidikan Anak Usia Dini: Tinjauan Literatur. *JURNAL RISET RUMPUN ILMU PENDIDIKAN*, 4(2), 388–399.
- Amelia, D., & Yuliani, S. (2024). Kolaborasi guru dan orang tua untuk inovasi pendidikan berkualitas di sekolah dasar. *JIPSD*, 1(1), 28–39.
- Amir, I., Rohmadheny, P. S., Purnama, S., Ulfa, R. D., & Ega, M. A. (2024). Play-based learning in practice: An exploration of early childhood education teacher's experiences in Yogyakarta. JECCE (Journal of Early Childhood Care and Education), 7(2), 77–94. https://doi.org/10.26555/jecce.v7i2.10948
- Andini, S. N., Sholeh, M., & Kumalasari, M. L. F. (2024). Analisis Job Burnout Dan Faktor Penyebabnya: Studi Kasus Pada Guru BK di SMPN 32 Surabaya. *Proceedings of PsychoNutrition Student Summit*, 1(1), 256–263.
- Angelia, A. T., Putri, N. K., & Susanti, U. V. (2025). Manajemen Penyelenggaraan PAUD: Strategi Efektif Dalam Meningkatkan Kualitas Layanan Pendidikan. *Edusiana: Jurnal Ilmu Pendidikan*, 3(1), 99–109.
- Branch, R. M. (2009). Instructional Design: The ADDIE Approach. In Antimicrobial agents and chemotherapy (Vol. 58). London: Springer Berlin Heidelberg. https://doi.org/10.1007/978-0-387-09506-6
- Bronfenbrenner, U. (1979). The Ecology of Human Development. Harvard University Press. https://doi.org/10.2307/j.ctv26071r6

- Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. SAGE Publications.
- Dwi Prihatini, S., & Inayah, Z. (2023). Hubungan Beban Kerja Dengan Kelelahan Kerja Pada Guru Taman Kanak-Kanak Pikpg Gresik. *Journal of Public Health Science Research*, 4(2), 13. https://doi.org/10.30587/jphsr.v4i2.5603
- Fiatunnabilah, D. L., & Rolina, N. (2025). Analisis Dimensi Beban Kerja Guru PAUD di Kota Pangkalpinang: Tantangan dalam Peningkatan Kualitas Pembelajaran Anak Usia Dini. *Kiddo: Jurnal Pendidikan Islam Anak Usia Dini*, 6(2), 557–570.
- Hardiyanti, D., Santoso, D. A., & Ratno, R. (2021). Keluarga: Pendekatan Teoritis Terhadap Keterlibatan Orangtua Dalam Pendidikan Anak Usia Dini. Sentra Cendekia, 2(1), 21–28.
- Harper, E., Wilson, R., & Mcgrath, S. (2025). Workload demands , unpaid hours , and concerns about time with children : a survey of Australian early childhood educators. In *The Australian Educational Researcher* (Vol. 52). Springer Netherlands. https://doi.org/10.1007/s13384-025-00847-z
- Hermahayu, H., Rasidi, R., & Zahra, A. A. (2025). Disiplin Positif dalam Meningkatkan Regulasi Emosi dan Perilaku Sosial Anak: Studi Kualitatif pada Pendidikan Anak Usia Dini di Kabupaten Magelang. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 9(3), 905–920. https://doi.org/10.31004/obsesi.v9i3.6909
- Hidayat, A. (2021). Manajemen Pengelolaan Kelas di PAUD (Studi kasus di TK Pelita Cendekia Sumber Rejeki Mataram). *Jurnal Pendidikan Islam*, 3(1), 2579–3683.
- Juita, A. K., & Woga, T. (2023). Stimulasi Perkembangan Kognitif Anak Usia Dini Melalui Media Konkret di TK Negeri Harapan Bangsa Koelodat. *Jurnal Citra Pendidikan Anak*, 2, 685–690.
- Kinanti, D. A., & Trihantoyo, S. (2021). Urgensi partisipasi orang tua siswa dalam penyelenggaraan pendidikan bermutu. *Inspirasi Manajemen Pendidikan*, 256–264.
- Latif, M., Amir, R., Marzuki, K., Gaffar, F., & Nurhayati, S. (2023). Kolaborasi Strategis Lembaga PAUD dan Orang Tua di Era Digital melalui Program Parenting. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7, 3169–3180. https://doi.org/10.31004/obsesi.v7i3.4485
- Mariam, S., & Sukirman, D. (2021). Fungsi Manajemen Kurikulum Pendidikan Anak Usia Dini (PAUD). *Inovasi Kurikulum*, 18(2), 208–221. https://doi.org/10.17509/jik.v18i2.36457
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative Data Analysis. SAGE Publications.
- Molenda, M. (2003). In search of the elusive ADDIE model. *Performance Improvement*, 42, 34—36. https://doi.org/10.1002/pfi.4930420508
- Munandar, A., Ramadhani, S. F., Ramadhan, M. A. R., Darmawan, H., Hamidah, N., Silviani, A., ... Thoriq, M. (2024). Model ADDIE (Analysis, Design, Development, Implementation, Evaluation) Pembelajaran Aqidah Akhlak di MTs Negeri 5 Kota Jambi. *Jurnal Pendidikan Tambusai*, 8(2), 29928–29936.
- Mustofa, M. (2018). Menghitung Beban Kerja Guru. Jurnal Audi, 3(1), 64. https://doi.org/10.33061/ad.v3i1.2075
- Patton, M. Q. (2014). Qualitative Research & Evaluation Methods: Integrating Theory and Practice. SAGE Publications.
- Purnamasari, I., Redjeki, E. S., Desyanty, E. S., Firdaus, Z., & Aruna, A. (2023). Peningkatan Kapasitas Pembelajaran Indoor dan Outdoor PAUD Melalui ABCD di TK/KB Laboratorium UM. *Prosiding Seminar Nasional Pengabdian Masyarakat*, 1.
- Puspitasari, Yulinda, P., Nasir, Muliyani, Rasid, & Bagea, I. (2024). Community-Based Human Resource Management in Quality Early Childhood Education. International Journal of Educational Management and Innovation Vol.5, 5(2). https://doi.org/10.12928/ijemi.v5i2.9175

- Republik Indonesia. *Undang-Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional.*, Pub. L. No. 20 (2003).
- Republik Indonesia. Peraturan Menteri Pendidikan Dan Kebudayaan Republik Indonesia Nomor 137., Pub. L. No. 137, Kementrian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia (2014).
- Rohiyatun, B., & Najwa, L. (2021). Pengelolaan sarana dan prasarana di PAUD. *Jurnal Visionary:*Penelitian Dan Pengembangan Dibidang Administrasi Pendidikan, 9(1), 1–5.
- Salwiah, S., & Asmuddin, A. (2022). Membentuk Karakter Anak Usia Dini melalui Peran Orang Tua. Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 6(4), 2929–2935. https://doi.org/10.31004/obsesi.v6i4.1945
- Sausan, A. N., Cantika, B., Azhari, N., & Haqi, Y. M. (2022). Pengaruh Stimulasi Alat Permainan Edukatif Terhadap Perkembangan Kognitif Pada Anak Usia 5-6 Tahun. ASGHAR: Journal of Children Studies, 2(2), 125–130. https://doi.org/10.28918/asghar.v2i2.6302
- Sihombing, E. V., Zahrianis, A., Saragih, N. R. A., Andini, R. T., Yopiasnyah, A., & Anggraini, E. S. (2025). Analisis Permasalahan Penggabungan Ruang Kelas dan Ruang Bermain dalam Optimalisasi Lingkungan Belajar Anak Usia Dini di Ruang Terbatas. *Jurnal Intelek Insan Cendikia*, 2(6), 12703–12713.
- Simatupang, A. N., & Asriati, N. (2024). Analisis Bantuan Operasional Satuan Pendidikan Pada Paud Tk Swasta Methodist Non-Profit. *Jurnal Tahsinia*, 5(6), 853–862.
- Sriwanto, W., Hk, M. N., & Juliadi, Y. (2024). Konsep Pengelolaan Desain Lingkungan Pendidikan Anak Usia Dini. *Jurnal Pendidikan Islam Al-Affan*, 4(2), 123–130.
- Sumiharsono, H. M. R. (2024). Manajemen berbasis nilai sosial dan ekonomi untuk keberlanjutan lembaga paud. *JECIE (Journal of Early Childhood and Inclusive Education)*, 8(1), 247–252. https://doi.org/10.31537/jecie.v8i1.2177
- Susanti, U. V., Nurohmah, N., & Anisa, N. (2025). Meningkatkan Mutu PAUD (Pendidikan Anak Usia Dini) Melalui Menajemen. *Edusiana: Jurnal Ilmu Pendidikan*, 3(1), 82–89.
- Suwandi, S., Kurniawati, N. I., Werdani, R. E., & Kholidin. (2023). Revitalisasi Fasilitas Belajar Anak Usia Dini dalam Mendukung Tujuan SDG's Sektor Pendidikan di Pendidikan Anak Usia Dini. GOTAVA Jurnal Pengabdian Kepada Masyarakat, 1(1), 17–20. https://doi.org/10.59891/jpmgotava.v1i1.4
- Swanson, R. A., & Holton, E. F. (2001). Foundations of Human Resource Development. Berrett-Koehler.
- Telaumbanua, A., PS, C., HL, C., Harefa, N. A. J., Pd, M., Zebua, Y., ... Th, S. (2025). *Perkembangan Peserta Didik*. Azzia Karya Bersama.
- Tiara, D. R. (2024). Pengaruh Standar Sarana dan Prasarana terhadap Motivasi Kerja Guru Daycare. *Journal of Child Research*, 1(May), 55–65.
- Utari, R. Z., & Alimni. (2025). Manajemen Pendidikan Anak Usia Dini (PAUD) Dalam Rangka Meningkatkan Mutu Pembelajaran Pada Anak. *Early Child Research and Practice ECRP*, 5(1), 27–30.
- Virli Susanti, U., Destriani, E., Kunci, K., Kurikulum, M., Belajar, L., & Usia Dini, A. (2025). Manajemen Kurikulum PAUD: Membangun Lingkungan Belajar Yang Responsif Terhadap Anak. 3(1), 74–81.
- W.Creswell, J. (2018). Designing and Conducting Mixed Methods Research.
- Yanto, S. (2018). Analisis Manajemen Kelas Pendidikan Anak Usia Dini (PAUD) Dalam Meningkatkan Perkembangan Siswa pada PAUD Tunas Bangsa Kota Bengkulu. *Journal Of Early Childhood Islamic Education*, 2(1), 242–250.