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# Improving Early Childhood Learning Outcomes Through Active Play and Exploration

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**Abstract**

*A qualitative investigation studies active play and exploration effects on early childhood educational successes through observations at three different Makassar City centers. The research design relied on conducting case studies through observations of participants while using semi-structured interview data together with both document analysis and focus group discussions to obtain extensive knowledge. Active play develops cognitive abilities through better development of critical thinking abilities together with problem-solving potentials as well as creative thought. Social and emotional capabilities developed throughout child interactions because children learned to work together and demonstrate empathy as well as self-regulatory skills. Educational professionals helped children develop meaningful play activities through strategic guidance methods although parents recognized the value of play for increasing educational outcomes in and out of school environments. The study worked to fill research gaps through thorough evidence about play-based learning effectiveness within educational institutions which maintain traditional rote-learning methods. The results demonstrate why teaching staff need to blend child-driven work with teacher-guided activities to meet development milestones. The study recommends the cooperation between families and educators to enhance the educational potential of play-based approaches. Research findings demonstrate enough evidence to show that policymakers and early education professionals should make active play an essential foundation of their learning programs. Such educational initiatives will enable the development of whole-child growth while fostering classrooms which promote enduring abilities for children.*

## Introduction

Early childhood education plays a crucial role in shaping the cognitive, social, and emotional development of children, laying the foundation for lifelong learning. As children between the ages of 3 and 6 years undergo rapid developmental changes, their early educational experiences can have significant long-term effects on their academic performance and personal growth (Jing, 2025; Roberts et al., 2022). Among various instructional strategies, active play and exploration have emerged as vital components in early childhood education, offering children opportunities to engage in hands-on learning experiences that stimulate curiosity, problem-solving, and creativity (Suryana et al., 2022). These approaches allow young learners to connect with the world around them in meaningful ways, fostering the development of essential cognitive and social skills (Saavedra & Prentice, 2023).




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The main organizational principle of early childhood education across worldwide programs relies on play-based learning. Research confirms that active play functions as an effective learning method to support complete child development when children use it to explore through natural self-directed learning (Skene et al., 2022; Ahmed et al., 2023). Children use active play and exploration to enhance their motor skills besides developing their physical abilities as well as improving their language abilities while refining their cognitive functions and social abilities (Kurnia et al., 2024; Shi & Feng, 2022). Early learning spaces heavily depend on active play as children need this experience for understanding their environment while expressing feelings and developing core academic and social skills.

Research evidence confirms that playful learning during early education builds favorable cognitive results for children. Research done by Egwutvongsa & Seviset (2021) demonstrates children who get child-centered active learning opportunities demonstrate improved creativity alongside problem-solving skills and enhance academic performance in the future. Through active play children develop an innate learning passion because they learn to form questions and experiment with hypotheses and build their critical thinking abilities (Sääkslahti, 2021). The active exploration of their environments builds children's feelings of personal authority and confidence which enables them to manage their learning process (Covelli, 2024).

The practices of exploration in early childhood education environments support essential cognitive development processes in children. Children actively explore new environmental stimuli through active investigation until they gain an understanding of their world. According to Lin & Powell (2022) the development of cognitive abilities including memory attention and problem-solving depends on this process which leads to later academic success. The research shows child learners who get directed playtime or active explorative experiences develop better cognitive abilities which include enhanced language development with better logical reasoning as well as independent problem-solving abilities (Schäfer et al., 2024).

The substantial research evidence about active play and educational exploration benefits has not closed the gap which schools need to know how to implement these practices systematically in early childhood education. Numerous educators recognize early learning benefits of play but limited time and training together with scarce resources work against routine play-based strategy implementation (Nikolopoulou, 2021). Active play together with exploration fail to reach their complete potential in some classrooms because of which several children lack meaningful learning opportunities (Ford et al., 2021).

Educational approaches during early childhood get their direction from the cultural views which exist about education. Several educational systems prioritize formal instruction delivered by teachers thus providing minimal space for free exploratory activities which help cognitive along with social development. Child development requirements diverge from institutional educational practices because schools prioritize academics above play activities. A comprehensive study must analyze the impact that various educational environments both inside and outside standard school institutions have on the implementation of active play and exploration practices within early childhood education.

Educational policy makers now advocate for a new approach to early childhood education because they understand play functions as an effective learning instrument. The growing




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number of curriculum models such as Montessori and Reggio Emilia use hands-on approaches to educate children so they can develop their intellectual abilities along with social skills (Avetisyan & Konjoyan, 2023). Research supports active learning approaches that incorporate play as it enables educational development of deep understanding alongside creativity while nurturing discovery skills which match the shared academic view that play serves as crucial learning (Saracho & Evans, 2022).

The current research investigates the relationship between active play together with exploration for enhancing learning results in early childhood contexts. The research investigates play-based education through educator and child observations to establish better knowledge about active play's beneficial role in early learner psychosocial skill development. The study discoveries present important guidelines to implement play activities and exploration within early childhood educational programs that will enhance students' abilities for future success.

The advancement of early childhood education needs proof-based knowledge about how active play together with exploration benefits children's learning. Through this study the gap is being filled by investigating how these educational methods improve early childhood learning achievements while developing capable students.

**Method**

A qualitative research investigation studied the effects that active play and exploring environments have on early educational development of young children. The researcher implemented a case study methodology to study early childhood education teachers and students in three centers located in Makassar City. The chosen centers received selection because they demonstrated their dedication to bringing active play and exploration into their educational programs. The research design included purposive sampling to study 30 children together with 6 preschool teachers and 2 teaching assistants who engaged in play-based learning activities. The investigators conducted this study to determine the effects of active play on children's cognitive growth as well as their social emotional development.

The researcher performed participant observation as the main data collection technique during a four-month observation period within the chosen classrooms. The research study included a daily examination of classroom activities to document playtime interactions between children and their environment alongside educator learning facilitation methods. Methods of observation remained non-participatory yet the researcher recorded comprehensive notes about activities together with children's engagement levels and facilitation techniques employed. The researcher transcribed the field notes for doing thematic analysis to explore various elements of play-based learning.

Semi-structured interviews served as a parallel method to observations because they allowed six educators to expand their understanding of active play's learning effects on children. The open interview structure gave the participating educators space to discuss their beliefs about integrating play-based learning together with their faced barriers and educative approaches. The administrator interview assessed both active play benefits and their effects on children's mental skills along with social relationships and emotional well-being. Analyzing the




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interviews required transcription with detailed word-for-word notes followed by thematic analysis which revealed main patterns within the gathered data.

Parents or caregivers of participating children joined focus groups for discussions. The discussions focused on exploring parent perspectives about the learning effects of active play activities and their approaches to supporting home-based play learning activities. The focus groups established an overview of the play-based learning outcomes that affected child development beyond regular educational settings. The audio-recording of discussions enabled the researchers to transcribe the conversations before performing data analysis for identifying prevailing parental viewpoints.

The research investigated curriculum materials together with lesson plans and activity logs from the involved centers through document analysis. These data collection methods provided context for analysis by showing how play-based learning appeared in official center curricula together with associated learning expectations. The examination of curriculum documents discovered systematics within active play delivery along with evidence demonstrating educator classroom practices supporting the established educational aims. The relationship between active play and early childhood exploration became fully visible through the combined information gathered through observational data and interviews and focus groups and document analysis.

**Result and Discussion**

Active play combined with exploration functions as a base element in early childhood education because it enables an active approach to learning advancement. Instead of old-school rote memorization styles education organizations use play-based learning methods which allow students to interact with real objects during activities that develop their mind as well as their social and emotional abilities and their physical capabilities. Recent evidence proves that this methodology increases capabilities in problem-solving along with creativity and social aptitude (Fisher et al., 2021; Whitebread et al., 2019). Systems of early childhood education that follow established cultural teaching practices continue to lean toward non-use of play-based educational methods. The lack of research on active play impacts is addressed through investigations that evaluate its effects on education outcomes at early education settings across Makassar City. The research findings establish meaningful understanding about active play development for children by collecting qualitative feedback from educators as well as parents and their children which leads to better educational practice implementation.

**Cognitive Development through Active Play**

Young children use active play as their fundamental opportunity to master problem-solving abilities. Learning situations that need critical thinking along with decision-making happen during block construction and puzzle assembly and treasure hunt activities. During sessions of observation children commonly worked together to solve tasks like puzzles while building towers which showed their capability to make plans for analysis and execution of solutions.

> *"When children engage in problem-solving during play, they learn to think critically and explore multiple ways to achieve their goals."*




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The active form of learning lets children deal with obstacles and create solutions which develops their ability to adapt and their resistance against difficulties. Children who repeatedly addressed problems in their daily lives obtained increasing self-assurance about their capacity to deal with complex challenges. Play-based learning activities improved children's capabilities in language development and their communication abilities. Games which require children to simulate household roles or running a shop help them develop their vocabulary skills. Engagement in imaginative play scenarios allowed children to naturally adopt new words when communicating about their imaginative activities while practicing how to construct proper sentences along with effective thought articulation.

> *"During role-play, I often see children using words they've just learned in class, which helps them remember and understand better."*

The settings of play required children to learn collaboration and discussion which enhanced their ability in both speech and nonverbal expression. Through this interaction children perfected their active listening abilities which serves as a fundamental social requirement for human relationships alongside social cue understanding. During active play children developed their ability to think mathematically and logically while reasoning patterns and solutions. The development of crucial numeracy skills and spatial competence in children resulted from playing activities that involved sorting objects by color or shape and group games for counting and maturing distances through outdoor activities. Child participants who took part in these activities demonstrated better abilities to recognize patterns along with sequencing skills and logical organizational methods. Children engaged in documented activities when they measured mats using toy cars to determine length with a dual requirement of estimation and comparison while modifying their measurements.

> *"We encourage children to explore numbers and patterns during play, which makes learning math concepts more engaging and relatable for them."*

The combination of educational experiences developed into positive arithmetic views through purposeful enjoyable learning activities. Research data demonstrates that active play plays an essential part in developing young children's brain functions. Children develop their reasoning abilities while improving communication skills through interactive play-based activities because these activities contribute to problem-solving strength. The educational support from teachers made play-based interactions a fundamental aspect of student growth that prepared students for academic and life obstacles.

**Social and Emotional Development through Play**

During active play children experienced a moving format to develop their understanding of cooperation and teamwork. Children participated in group building activities with blocks and group games that needed them to collaborate while sharing duties and taking joint decisions together. The observational period revealed that children automatically arranged themselves into collaboration tasks while also providing assistance to their peers for goal attainment.

> *"In group play, I see children helping each other and learning to respect different ideas. It's amazing how they figure things out together."*




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These reciprocal practices enabled children to comprehend the essence of teamwork and how to operate collaboratively with others. The experiences developed both feelings of belonging along with essential teamwork skills that children needed for future cooperative situations. Play-based activities developed emotional regulation abilities in children through their activities. Attributed to pretend play children learned the essential skills of emotional management together with understanding human feelings in different social situations. Children participating in a role-play scenario demonstrated their abilities to deal with emotions and show empathy while enacting the caring for a sick friend and game role negotiation scenarios.

> *"When children play together, they face situations where they might feel frustrated or excited, and we guide them to express those feelings constructively."*

Children could develop emotional maturity through practice of self-control and empathy while participating in these activities. The act of playing contributed substantially to children's personal sense of self-worth and their inner confidence. Active exploration and achievements resulting from play activities allowed children to increase their self-confidence about their abilities. The successful completion of hard puzzles alongside the leadership of teamwork activities created proud emotional reactions for children.

> *"I notice that when a child masters a task during play, their confidence grows, and they are more willing to try new things."*

Playtime gave children liberty to choose what they wanted which made them sense empowered thus increasing their self-esteem and personal independence. The reinforcement provided encouragement which helped children develop resilience as well as a growth mindset. kids faced limitations in their play activities where disagreements happened about who takes turns or distribution of resources thus offering real chances to learn solutions for disputes. Children commonly engaged in solution negotiations and apologies and cooperative compromise through observations until teachers provided necessary guidance.

> *"When conflicts arise during play, we use it as a teaching moment to help children learn to express their needs and find solutions respectfully."*

The interactions gave children the opportunity to build important social capabilities including active listening and perspective-taking and compromise abilities that serve as base elements for preserving healthy interpersonal bonds. The active development experiences helped children build essential social and emotional capabilities as fundamental elements for their individual growth. Through play-based learning activities children learned social-emotional skills which enabled them to regulate their emotions and work with confidence but also solve conflicts to create a supportive learning environment. The results underline why it is crucial to incorporate active play activities for kids at early stages because they boost complete child development.

**Teacher Facilitation in Play-Based Learning**

Educators imparted crucial influence on environmental planning to develop adaptive learning settings that both guided and supported children's play-based exploration. Educational settings




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arranged through different materials including building blocks and art supplies and role-play props enabled children to freely explore the environment. These materials were specifically chosen to match learning objectives but provided students enough independence for experimentation.

> *"We set up activity corners with different themes so that children can choose where they want to play, but we also guide them subtly to ensure the activities are meaningful."*

The structured environment supported by child autonomy produced creative outcomes that made learning goals blend naturally into play activities. The educational staff functioned as guiding figures through which they enabled children to receive maximum learning opportunities while engaging with play activities. The educators tracked children's interaction behaviors until they needed to step in only for implementing fresh play elements or conflict resolution without altering the children's initiative-based play sessions.

> *"What do you think will happen if we add this block here?" A teacher emphasized, "Our role is not to take over but to help children think deeper and expand their ideas."*

Children built existing knowledge through play as the approach enabled them to learn new things. The teachers made group activities to promote collaboration and social interaction because they incorporated tasks which needed teamwork along with communication. Children built interpersonal abilities through combined role-playing situations and team-based cooperative games as well as group artistic activities. Teachers regularly stepped in to guide children's social exchanges for helping them understand multiple perspectives.

> *"When children work together, they learn to negotiate, share, and communicate. We step in only when they need guidance, so they develop these skills naturally."*

Through this method children developed important social abilities which equipped them for teamwork in future academic environments. The instructional staff observed children during their playtime to both evaluate student development and tailor programs in alignment with students' particular requirements and preferences. The observations of child engagement helped teachers understand what developmental stages students were at while revealing their personal learning preferences. Teachers maintained field notes that recorded their adjustments to activities which supported the particular requirements of individual children. The teacher found suitable opportunities to let a child with fine motor difficulty try bead threading and thus help them improve.

> *"Play gives us a window into each child's strengths and areas for growth, and we use this to plan future activities."*

Assessments at different points completed the process to keep the learning approach both effective and developmentally appropriate. The educational staff acted as demonstrators who showed children appropriate behavioral habits including sharing items and handling both problems and strong emotions. Participation in play scenarios allowed teachers to demonstrate through their actions three crucial aspects of interpersonal interaction and conflict resolution and emotional expression. One play scenario observed during the study showed a teacher




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pretending to be a shopkeeper who showed children proper methods for taking turns along with polite language usage.

*"Children often mirror what they see, so we use play as a chance to show them positive behaviors."*

Teacher modeling provided additional confirmation to children about the social-emotional competencies they acquired through playful activities. The teachers served as important guides who made play-based learning simultaneously engaging and educational for students. Through the establishment of organizational structures, they guided social exchanges while encouraging teamwork while demonstrating appropriate conduct which improved the outcomes of active play for early childhood developmental growth. These research results confirm that teacher intervention plays a critical role in generating meaningful effects through play activities within early childhood education.

**Parent and Caregiver Perspectives on Play-Based Learning**

The majority of participants from the study identified play as an indispensable method that helps children learn and grow. Almost all participants observed that their children developed stronger cognitive abilities along with improved social abilities and emotional development when they learned through play activities.

> *"I've seen my child learn to count, identify shapes, and even recognize letters while playing with blocks or during games. It's amazing how much they absorb through such activities."*

Parents appreciated the emphasis on hands-on and experiential learning, which they felt was more engaging and effective than traditional teaching methods. This recognition was particularly strong among caregivers who observed their children displaying new skills at home, reinforcing the educational impact of active play. Parents highlighted that play-based learning fostered significant improvements in their children's social skills and confidence. Through collaborative play, children learned to share, take turns, and work as part of a team.

> *"My child used to be shy and hesitant to join group activities, but since participating in these play sessions, they have become more outgoing and willing to engage with their peers."*

This perspective aligned with the observations of educators, who noted similar growth in children's ability to navigate social situations. Parents expressed gratitude for the role that play-based learning played in preparing their children for future social interactions, both in school and in broader community settings. While parents were enthusiastic about the benefits of play-based learning, they also voiced challenges in implementing similar approaches at home. Some caregivers cited a lack of time, resources, or understanding of how to facilitate meaningful play.

> *"I want to continue what the teachers are doing, but it's hard to know what activities are appropriate or how to make them educational."*

Others noted that competing demands, such as work and household responsibilities, often left little room for structured playtime. These challenges highlighted the importance of providing




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parents with resources and guidance to support play-based learning beyond the classroom. Parents expressed a strong desire for better alignment between the play-based learning activities conducted at school and those practiced at home. They felt that consistent approaches would help reinforce their children's learning and development. Some caregivers suggested that teachers share activity ideas, materials, or guides that could be adapted for home use.

> *"It would be helpful if we had a booklet or regular updates on the types of play activities happening in school so we can try similar things at home."*

This request emphasized the need for collaboration between educators and parents to create a cohesive learning experience for children. Overall, parents expressed high levels of satisfaction with the incorporation of play-based learning in early childhood education. Many advocated for its continued use, citing noticeable improvements in their children's overall development.

> *"I've seen such positive changes in my child since they started this program. I hope the school continues to focus on play as a key part of learning."*

These testimonials reflected a strong endorsement of the play-based approach and its impact on early childhood outcomes. The perspectives of parents and caregivers provided valuable insights into the broader implications of play-based learning. Their recognition of its benefits, coupled with their challenges and suggestions, underscored the importance of collaboration between educators and families to maximize the potential of active play as a learning strategy.

The research investigated the relationship between active play and exploration on early childhood learning development by accumulating evidence that supported current studies. According to Fisher et al. (2020) and Whitebread et al. (2021) previous research has demonstrated the value of play for complete development during the early childhood stage. Diverse educational environments require additional research about the direct effects of particular play techniques on child mental development and social growth. Qualitative data collection throughout three early childhood centers in Makassar City generates insightful exploration of active play implementation along with its effects on children's learning outcomes in the context of research scarcity in Indonesia.

The research outcomes show that active play enhances important thinking abilities including problem-solving along with memory development and critical thinking capability. Traditional teacher-led instruction stands as the dominant approach to cognitive development according to the findings of Estaji & Jafari (2022) but this study presents different evidence. This research establishes that children gain core capabilities during block-building and imaginative activities but they stay highly involved and fond of these tasks at the same time. The study responds to Etokabeka (2021) demand for empirical research about structured and unstructured play integration in early education.

The study makes a significant impact by investigating the development of social and emotional learning (SEL) through collaborative activities between students. This research offers concrete illustrations about the social skill development of children through their play activities but builds upon previous research done by Dondi et al. (2021) which identifies group activities as essential to skill development. The teachers observed children's progress in managing social interactions during group work because it strengthened their relationships with others.




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Social learning occurs through group activities according to Beyt et al. (2021) explanation of social development. This investigation goes beyond Vygotsky's model by showing how traditional games which are aligned with cultural heritage help SEL development in children. The research fills a gap that Oyegoke et al. (2024) identified through their observation that play-based learning requires culturally relevant social benefit studies.

The research finds that teachers play an essential part in designing and facilitating meaningful play activities in education similarly to findings presented in Boysen et al. (2022) The research takes a different approach from previous work since it focuses on how educators actively provide learning support while skipping the common child-initiated play focus. Teachers in this research structure play activities to match developmental targets but they grant children autonomy to investigate and test ideas.

The research develops new understanding about teacher-directed and child-initiated play balance through its detailed framework (Veraksa et al., 2023). This research uses combined interview and observation methods to offer methods which educators can use to maintain a balance between learning and enjoyment during play time.

This study produces major findings through its evaluation of how parents perceive play-based learning. The majority of previous studies concentrate on classroom environments while giving insufficient attention to caregivers' actions which enhance learning outside school settings (Brink et al., 2021). Research fills this knowledge gap by hosting focus groups with parents that demonstrate their interest in play-based learning which also shows their struggles with comparable activities during home activities.

Mutual school-home practices receive support from parents as they highlight the vital need for teachers to work together with caregivers. Wilder (2023) support these findings because they agree on the essential value of parental involvement in early childhood education. Research recommendations guide the development of unified learning spaces by identifying the parental barriers which include time limitations and resource scarcity.

Early childhood education policy alongside practice obtains vital conclusions from this research investigation. The research supports funding enhancements for programs that teach teachers how to structure play-based learning activities. The research proves that effective instructor training stands vital for maximizing active play benefits which support children during their cognitive growth and social development and emotional development.

The research indicates that a systematic development of educational toolkits should happen to enable parents in implementing age-appropriate educational play activities at their homes. These initiatives would unite the educational settings between schools and homes by maintaining consistent learning processes for children.

This research offers important findings despite having limitations which stem from studying within one particular cultural setting and geographical area. Modern-day research needs to investigate how play-based learning functions across different multicultural backgrounds to improve existing knowledge about its behavioral impact. A series of extended research should explore how children experience academic and social development during multiple years after participating in active play activities.




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This study adds to play-based learning research by showing its establishment as an efficient method of early childhood educational practice. Every child must experience the transformative advantages of play because the researchers emphasize that educators and policymakers along with parents need to keep working together.

## Conclusion

The research reveals how play-based learning methods enable essential early childhood education developments of critical thinking skills as well as friendship relationships and social competencies. The research explores cultural variables of Makassar City to show how organized and natural child play activities with educator support and parental backing result in complete child growth. Professional teacher participation and scaffolding of play-based activities together with culturally appropriate educational practices improved student achievement according to research findings yet parent viewpoints showed the necessity of learning areas sharing between school and home environments. Early childhood learning benefits from dual educational and joyful aspects of play thus demanding collaborative work between educators' families and policymakers.

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