



Description Regarding the Influence of Teacher Qualifications and Competence on Early Childhood Learning Achievement

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ABSTRACT

This research examines the impact of teacher qualifications and competencies on children's academic achievement in Early Childhood Education (ECE) schools. Using quantitative methods, data were collected from 100 children in ten ECE schools. Teacher qualifications were evaluated based on formal education and training, while competencies were assessed through evaluations and feedback. Children's academic achievements were measured using academic and socio-emotional development assessments. Results show a significant positive correlation between teacher qualifications and competencies and children's achievements. Teachers with higher qualifications and better competencies have students with higher academic and socio-emotional achievements. The study highlights that interpersonal competencies, such as communication skills and empathy, greatly impact children's socio-emotional development, while academic qualifications more strongly influence academic outcomes.

INTRODUCTION

Early Childhood Education (ECE) plays a crucial role in establishing the foundational development of children (Harju-Luukkainen, 2023). According to Engdahl & Furu (2022), the early years, encompassing the first few years of a child's life, are pivotal in laying the groundwork for lifelong learning, health, and behavior. During this period, a child's brain undergoes rapid development, forming millions of neural connections per second, which are fundamental for subsequent learning, behavior, and health (Immordino-Yang et al., 2019). Quality ECE is essential in maximizing these developmental opportunities. In ECE settings, children learn critical skills such as socialization, cooperation, and sharing, crucial for successful social interactions. Moreover, ECE introduces academic concepts like language and mathematics early on, preparing children for primary education. Emotional and personality development are also fostered in ECE, promoting attributes like self-confidence, curiosity, and perseverance (Gath et al., 2024).

The qualifications of ECE teachers are pivotal in determining the quality of education children receive during their formative years (Eadie et al., 2022). According to Fonsén et al. (2023) and Samsinar et al. (2024), these qualifications typically include formal education levels, such as degrees in ECE, child psychology, or related fields, along with specialized professional training in teaching at the ECE level. These credentials not only signify the academic expertise of teachers but also their deep comprehension of contemporary ECE theories and practices. Teacher qualifications are crucial as they enable the design and implementation of tailored learning programs that meet the developmental needs of children. Qualified teachers adeptly recognize diverse learning styles, understand cognitive and emotional developmental stages, and adapt teaching methods to optimize learning effectiveness (Putri & Siswanto, 2024). Moreover, these qualifications equip teachers to address challenges such as socialization difficulties, learning impediments, or behavioral issues.

Effective communication with parents and guardians is another benefit of teacher qualifications in ECE, facilitating collaborative efforts to support children's development (Toros et al., 2021). These qualifications often include training in identifying and referring children who may require additional support services, such as special education interventions. In a broader context, teacher qualifications not only influence individual learning outcomes but also enhance the overall standards and reputation of educational institutions. Thus, investing in enhancing ECE teacher qualifications is pivotal in elevating the quality of early childhood education.

Children's learning achievements in ECE encompass a broad spectrum beyond traditional academic accomplishments (Su & Yang, 2022). Mastikawati et al. (2022) note that at this stage, learning achievements focus on holistic child development, covering cognitive, social, emotional, physical, and language domains. Cognitive achievements involve fundamental skills like number and letter recognition, shape understanding, and early problem-solving abilities, often assessed through interactive and game-based learning activities aimed at fostering critical thinking and creativity.

LITERATURE REVIEW

Teacher Qualifications

Teacher qualifications are one of the main factors influencing the quality of education. Studies by Siswanto et al. (2024) show that teaching quality is the most important school factor in determining student achievement. Teachers who have good qualifications, including an appropriate educational background, professional training, and adequate teaching experience, tend to be more effective in managing the classroom and delivering subject matter in a way that students can understand. This qualification covers not only academic aspects but also pedagogical competence, which includes the ability to understand students' needs, develop relevant curricula and apply innovative teaching methods.

Other research by Amado et al. (2022) highlights that teacher qualifications are not only limited to formal certification but also include professional skills acquired through experience and continuous training. Teachers who engage in regular professional development tend to be more adaptive to changes in the curriculum and student needs. This is also reinforced by findings from Pisriwati et al. (2024) which show that teaching experience during the first few years has a significant impact on teacher effectiveness, where teachers with more experience show better performance in increasing student achievement compared to teachers who are just starting their careers.

Apart from that, teacher qualifications are also closely related to the teacher's own welfare. Research by Alenezi (2023) revealed that teachers who feel supported by the school and have access to adequate resources tend to have higher job satisfaction, which in turn influences their performance in the classroom. Good teacher well-being contributes to reducing levels of stress and burnout, which are often the main causes of high turnover rates among teachers. Thus, improving teacher qualifications must be accompanied by efforts to ensure their welfare in order to provide optimal teaching.

Teacher Competency

Teacher competency is an important aspect that determines the quality of education and the effectiveness of teaching in schools. According to Daminov (2020), teacher competence includes pedagogical, social, individual and professional competence. Pedagogical knowledge is the ability to integrate these two aspects to convey material in a way that can be understood by students. Teacher social competence refers to the fact that teachers must be able to be tolerant towards the school community and students' parents (Siswanto et al., 2024). Teacher individual competence refers to the teacher's personal ability to carry out teaching tasks. Teacher professional knowledge refers to the teacher's mastery of the subject matter being taught, while pedagogical knowledge includes the ability to apply effective teaching strategies and methods.

Research by Alemayehu (2021) emphasize the importance of continuous professional development in improving teacher competence. Structured and ongoing professional development allows teachers to continually update their knowledge and skills in accordance with the latest developments in the field of

education. This includes various activities such as training, workshops, and collaboration with fellow teachers. This study found that teachers who actively engage in professional development tend to be more innovative in their teaching practices, able to adapt to curriculum changes, and more effective in meeting students' individual needs. Thus, professional development is key in maintaining and improving teacher competence.

Apart from knowledge and professional development, teacher competency also includes the ability to create a conducive learning environment and support students' social-emotional development. According to Alzahrani et al. (2019), competent teachers not only teach academic content but also pay attention to students' emotional well-being. They are able to build positive relationships with students, manage the classroom effectively, and develop an inclusive and supportive classroom climate. This ability is important because a positive and supportive learning environment can increase student motivation, strengthen interpersonal relationships, and create optimal conditions for learning. Thus, teacher competency is a combination of academic knowledge, pedagogical skills, and social-emotional abilities that together support effective learning.

Learning Achievement

Student learning achievement is the result of a complex educational process and is influenced by various factors. According to Bloom's theory, learning achievement is influenced by three main domains: cognitive, affective, and psychomotor. The cognitive domain relates to students' intellectual abilities, such as knowledge, understanding, and problem solving. The affective domain includes students' attitudes, interests, motivation and values, while the psychomotor domain involves physical and motor skills. Research shows that balance and interaction between these three domains is very important to achieve optimal learning achievement. For example, students who have high motivation (affective domain) and good learning skills (cognitive domain) tend to achieve higher learning outcomes.

Research by Magdalena et al. (2020) identified a number of factors that have a significant impact on student learning achievement. Some key factors include the quality of teaching, feedback provided to students, parental involvement, and school climate. Hattie found that the quality of teaching, including the teacher's ability to manage the class, deliver material effectively, and provide constructive feedback, had the greatest influence on student achievement. In addition, parental involvement in the educational process, both through support at home and active participation in school activities, has also been proven to contribute positively to student learning outcomes. A positive school climate, characterized by a safe, supportive and inclusive environment, also plays an important role in promoting academic achievement (Siswanto & Peni, 2023).

Apart from these factors, the use of technology in education has also become a focus of research in recent decades. According to a study by Tanikawa et al. (2024), educational technology can improve student learning achievement if used in the right way. Technology enables personalization of learning, provides

access to a wider range of learning resources, and supports more interactive and engaging teaching methods. However, the effectiveness of technology in improving learning achievement depends greatly on how the technology is integrated into the curriculum and used by teachers. Teachers who are skilled in using technology as a teaching tool can create richer and more effective learning experiences for students. Therefore, developing teacher technology competence is also key in maximizing the benefits of technology for student learning achievement.

Early Childhood Education Programs

Early Childhood Education (ECE) plays a crucial role in a child's early development, forming a solid foundation for lifelong learning. According to UNESCO, ECE refers to care and education for children aged 0-8 years, which focuses on their physical, cognitive, emotional and social development. Quality ECE programs provide appropriate stimulation according to children's developmental stages, preparing them to enter formal education with good readiness. Research shows that investing in early childhood education can produce long-term benefits, such as improvements in children's academic abilities, health, and social success.

The study by Pitkäniemi et al. (2024) highlighted the importance of factors such as teacher quality, appropriate curriculum, and a supportive learning environment in increasing the effectiveness of ECE programs. Well-trained ECE teachers are able to integrate children's cognitive and socio-emotional development into daily learning activities. A curriculum that is holistically designed and based on scientific evidence ensures that every aspect of a child's development receives appropriate attention. Safe, creative and inclusive learning environments also play an important role in facilitating child-centered exploration and learning, building a strong foundation for their future learning abilities.

Apart from that, the success of the ECE program is also closely related to the participation of parents and the community in supporting children's learning. Research by Maamin et al. (2021) shows that parents who are actively involved in their children's education tend to have children with better academic achievements and more positive social development. Collaboration between ECE schools, parents and communities enables the adoption of best practices in supporting children's overall development. This includes providing emotional support, providing access to educational resources, and promoting positive values that strengthen children's learning. Thus, early childhood education is not only about individual child development but also about creating a supportive environment for their holistic growth and learning.

METHODOLOGY

This research adopts a quantitative approach to gather numerical and qualitative data to deepen the understanding of teacher qualifications, competencies, and children's learning achievements. The study population includes parents of children enrolled in ECE programs. Samples were selected

using stratified random sampling techniques, ensuring broad representation from various socio-economic and geographic backgrounds. The targeted sample size was chosen to involve a sufficient number of parents to gain a comprehensive understanding of their experiences and perspectives.

Data collection involved distributing questionnaires to gather quantitative data. These questionnaires included questions related to children's social and emotional skills, which were completed by both teachers and parents. Classroom observations were conducted to assess children's social interactions and emotional responses in everyday situations. Additionally, in-depth interviews were conducted with teachers, parents, and, when possible, children to understand their perceptions of teacher qualifications, competencies, and children's learning achievements.

Data analysis utilized statistical methods to determine significant differences between experimental and control groups in social and emotional development aspects. Qualitative analysis identified the main themes from interview and observation data. The research acknowledges limitations, including the limited sample size and the specific school context, which may not represent all inclusive education settings. To address these limitations, the study incorporated procedures to enhance validity and reliability, such as data triangulation and pilot testing of instruments.

RESEARCH RESULT AND DISCUSSION

The findings of this research reveal a significant positive correlation between teacher qualifications and competencies and children's learning achievements in ECE settings. Quantitative data indicated that children taught by highly qualified and competent teachers showed significant improvements in cognitive, social, and emotional areas compared to those taught by teachers with lower qualifications and competencies. Specifically, these children exhibited more rapid development in language proficiency, socialization, and motor skills.

Qualitative analysis from interviews and focus group discussions revealed that highly qualified teachers were more likely to adopt innovative teaching methods and respond to the individual needs of children. These teachers also demonstrated better abilities in managing supportive and interactive classroom environments. Teachers with specialized ECE training and ongoing professional development were more effective in engaging with parents, contributing to a holistic learning environment for children.

Further qualitative results indicated that teachers' interpersonal competencies and empathy played a crucial role in creating a positive and supportive classroom climate, facilitating children's social and emotional development. Overall, this research provides strong evidence that enhancing the qualifications and competencies of ECE teachers significantly contributes to children's learning achievements, directly impacting the quality of ECE.

The influence of teacher qualifications and competencies on children's learning achievements in ECE settings is a critical area with broad implications for child development (Lui et al., 2020). Teacher qualifications, including formal education levels and specific ECE training, provide a crucial knowledge base for

teaching young children. These qualifications ensure that teachers have a theoretical understanding of child development, effective teaching techniques, and the specific needs of young children.

Teacher competencies, on the other hand, encompass practical skills in implementing effective pedagogical approaches in the classroom Susanti et al. (2023). This includes communication skills, empathy, classroom management, and the ability to design and implement age-appropriate learning activities. Competent teachers can adjust their approaches based on the individual characteristics of each child, ensuring that each child receives the attention needed to grow and develop.

Achievements in ECE are measured not only through academic progress but also through the development of social, emotional, physical, and cognitive skills (Saleem et al., 2024). Research has shown that highly qualified and competent teachers are more effective in supporting all these aspects of development. For example, they are more proficient in using child-centered learning strategies, enhancing children's engagement and motivation to learn (Alam et al., 2023). Additionally, competent teachers can create a safe and supportive learning environment, which is crucial for young children. Such an environment allows children to take risks in learning, explore their surroundings, and develop curiosity. Teachers' interpersonal skills also play a crucial role in developing positive relationships with children, boosting their confidence and desire to learn.

Teachers with high qualifications and competencies are also more effective in engaging parents in the learning process, which is a crucial factor in children's learning achievements (Listyanti et al., 2024). They communicate better about children's progress and provide resources or strategies to parents to support learning at home. Overall, the qualifications and competencies of ECE teachers have a significant and broad impact on the learning achievements of young children. Investing in teacher professional development, as well as enhancing qualification standards and training, is a key step to ensure that children in ECE receive high-quality education, providing a strong foundation for their future learning and development.

CONCLUSION AND RECOMENDATIONS

The conclusion of this study emphasizes the crucial role of teachers in Early Childhood Education (ECE) settings. Academic qualifications and professional training directly impact how teachers design and implement teaching strategies. Well-trained and highly qualified teachers can develop learning materials that are appropriate for children's developmental stages, address individual needs, and apply methods that promote holistic growth, encompassing cognitive, social, emotional, and physical development. The research indicates that investing in teachers' professional development not only enhances the quality of teaching but also strengthens the foundation for children's learning and development in their early years.

The influence of teacher competence on the learning environment is also critical. Teachers with strong interpersonal skills and empathy can create a safe, supportive, and nurturing environment, benefiting children's academic development as well as their emotional and social well-being. In such an environment, children feel secure to explore, take risks in learning, and express themselves. Additionally, teachers' communication skills facilitate more effective collaboration with parents, supporting a more integrative and holistic educational model that benefits children both at school and at home.

This research suggests that improving the qualifications and competencies of teachers is a significant investment in the future of ECE. Quality education in the early years has long-term effects on children's development, preparing them for further formal education and future success. The study emphasizes the need for higher standards in ECE teacher education and training, focusing on the development of both pedagogical and interpersonal skills. Implementing these recommendations will not only enhance children's learning achievements in ECE but also contribute significantly to the broader development of society, shaping a future generation that is more skilled, empathetic, and innovative.

ADVANCED RESEARCH

Every research certainly has limitations. Limitations in the sense of research limitations affect the researcher's ability to explore the data being studied, the limitations of available data, or external factors of the research such as time and resource limitations. So further research is needed for the perfection of this research.

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