



## **EXPLORING THE PERCEPTIONS AND EXPERIENCES OF ECE TEACHERS: AN IN-DEPTH STUDY OF THE FACTORS INFLUENCING LEARNERS' ACHIEVEMENTS**

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**Abstract:** This study explores the main factors that affect early childhood education (ECE) and how these factors affect teaching techniques or pedagogies and learning environments. The study uses interviews, observational data and an in-depth examination of the content of existing literature to examine educational, cognitive, socioemotional, physical, and environmental aspects. The results highlight the value of inquiry-based learning, reflective approaches, and modified teaching strategies in fostering young learners' self-sustaining learning and holistic development. Furthermore, it becomes clear that one of the most important components of ECE is the creation of welcoming, encouraging environments that celebrate diversity and foster emotional well-being. On the other hand, discrepancies in how physical activities are carried out and the disconnect between idealistic theories and practical applications underscore the necessity of increasing funding for resources, infrastructure, and professional development. Recommendations for improving the quality of early childhood education are given to educators, administrators and community stakeholders based on these findings. The aforementioned strategies encompass encouraging continuous professional growth, allocating funds for resources and supplies that facilitate movement and research, and cultivating cooperative alliances to establish inclusive and varied educational settings. Stakeholders in early childhood education can collaborate to create supportive and enriched learning experiences that support the holistic development of young learners by implementing tactics based on evidence and building collaborative partnerships.

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## **INTRODUCTION**

Early childhood education (ECE), is a crucial phase in the educational journey that lays the foundation for success, lifelong learning, and holistic development. It is at this stage that the young minds get the first taste of structured learning, and hence, the role of teachers in this sector becomes immensely critical and indispensable. Early childhood education is the initial gateway to further education. The improvement of the educational process in preschool educational institutions is the most important condition for promoting moral, spiritual and intellectual development (Hamidovna,2020). The goal of this research project was to illustrate the ECE teachers' own perspectives and experiences. The main focus of this study was to identify the factors that impact students' academic performance because they are the most important idea that is being addressed globally.

It's frequently highlighted how important it is to build critical thinking skills in children at early stages. Early childhood educators are crucial to improving the growth of young children's critical skills (Enrico et al, 2022). Taking into account the vital role of fostering critical thinking skills in children from an early age, it is clear that early childhood educators have an enormous impact in how young minds develop cognitively. The early years are critical for the acquisition of critical thinking abilities that enable kids to independently assess, analyze, and solve problems.

The qualifications possessed by the teachers, the length of professional experience they bring to the table, alongside the teaching techniques and methodologies they employ, all play a significant role in shaping the future of the young learners (Sujatha et al., 2023). These factors not only influence the academic achievements of the students but also affect their engagement in the learning process and their overall satisfaction with the educational experience.

Early childhood care and education (ECCE) have emerged to be a major issue for stakeholders and education policymakers. Growing amounts of studies are demonstrating its advantages for children's ability and academic success as well as how important it is to achieving fair, high-quality education and lifelong learning (Marope et al., 2015). These professionals in education play a critical role in creating an atmosphere that promotes inquiry, investigation, and curiosity in addition to delivering knowledge through a deliberate and customized approach to teaching. The integration of critical thinking-promoting activities into the curriculum of elementary schools and methods facilitates the way for lifetimes skill set that will enable kids to confidently and wisely negotiate the intricacies of a constantly changing world (Penas, 2023).

The study explores how teachers' qualifications and length of experience impact students' accomplishment levels and also intends to investigate the extent to which teaching experience is significant in imparting and dealing with early year young learners. Teachers' educational backgrounds, specialized training, and advanced degrees are only a few examples of their qualifications. Children's learning and competency development is supported and promoted by early childhood educators and preschool teachers (Magnuson et al., 2009). Teaching in early childhood requires extensive knowledge of child development, learning activities, and proficiency in teaching techniques.

According to Erradi et al (2024) teacher's role in imparting high-quality education is crucial, by critically analyzing the efficacy of various techniques, (including lectures, small-group activities, large-group activities, and hands-on learning exercises) approaches, and procedures, teachers may increase their expertise and improve the way they instruct students. A work carried out by Fernandez et al (2023) concentrated on one science teacher's involvement in a professional development course and how he arrived at novel insights regarding the importance of "hands-on" science activities. Program design that integrates science practices and makerspace resources into school curricula based on our study.

Early childhood educators can develop their capacity to integrate good pedagogy into routine practice through professional learning and the advantages of high-quality ECE in reducing the costs of special education (Young et al., 2019). They also have various additional functions in the classroom. They are well recognized for their responsibility to educate their children under

their supervision. All children benefit from specific pedagogical approaches that maximize their academic growth, language acquisition, social skills, and emotional-behavioral control.

ECE teachers at daycare facilities are in charge of creating individual early childhood education and care plans for each child, as well as conducting assessments. Relationship between emotional exhaustion (EE) and position, competence, job role, role clarity, and work tasks. The preschool teachers exhibited higher levels of EE prior to the addition of work tasks. Lovgren (2016) found a correlation between greater EE levels and parent-oriented tasks and teaching. The relationship between support, work role, and competence was inverse. In addition to caring for, training, and teaching children, early childhood educators are also in charge of planning and supervising the activities of their group.

### **STATEMENT OF THE PROBLEM**

The research study findings' indicate that there is a strong association between higher quality Early Childhood Education and Care (ECEC) environments and teacher qualification as stated by Manning et al. (2019). Specifically, evaluations of the language, reasoning, and program's structure categories, as well as general ECE qualities, are positively correlated with the educational background of care givers or teachers. A current summary of practicums as a crucial component of Early Childhood Teacher Education (ECTE) research. Research practicums highlight that more scientific research produces the nation's supremacy and it also advocates for the augmented scholarly approach in investigation into the viewpoints of Principals and youth. The position of the competent and moral supervisions, teacher educators, status of teacher and student as practicum designers and developers, as well as the creation of communal spaces to provide support for practicum learning and teaching which has emerged as the four main themes (Matengu et al., 2020).

### **RESEARCH OBJECTIVES**

- To examine the perspectives of ECE teachers to fully comprehend the early childhood education background.
- To explore the perception of ECCE teachers about the factors influences the academic achievement of students.
- To analyze the different approaches and pedagogical techniques that ECE teachers use in their instructions.

### **RESEARCH DESIGN**

Regarding this research the qualitative exploratory research approach was applied for acquiring an in-depth awareness of educators' perspectives on early childhood education, with a concentration on children's learning outcomes. The question under consideration was addressed through qualitative exploratory research, which allowed for a detailed analysis of educators' opinions and experiences, as well as a deep examination of the elements that influence learners' accomplishment. Developing questions and techniques, data acquired in the Respondent's context, inductive data analysis leading from specifics to broad themes, and the researcher's interpretations of the data's meaning are all part of the research process (Creswell, 2014). Comprehending these viewpoints and encounters is crucial since they have an effect on the

standards of teaching that young students receive also this can improve academic achievements and better support children's overall Learning outcomes.

### **STUDY POPULATION & SETTING**

The Total population of the research were around 5000 ECE schools in Karachi. All the teachers and students were included in this study. The school population is based on fee structure criteria from 5000 PKR to PKR 10,000.

The Total sampling of the study consisted of 30 Respondents. 25 children, (5 children in each school) ages 3.5 to 4.5, were chosen from each Early Childhood Education (ECE) school using Purposive sampling. Carefully chosen criteria were employed to guarantee that the sample pertinent to the study goals. By Systemic Random sampling I selected 5 portfolios of children for observation. For collecting interview data of this research investigation, the 5 teachers' perceptions and practices of ECE in 5 different schools in Karachi were chosen using a Convenient sampling technique.

This study employed a self-created interview questionnaire with 15 open-ended questions about ECE educator's demography, Factor Influences in learner's achievement, Pedagogies used by teachers. The researcher also used observation tool, and portfolio assessment to collect the data. Starting, the researcher took official permission to gather observational data. I obtained permission for sending a consent form prior to gathering interview material. I set up Zoom meetings via text messaging and email on WhatsApp. I led meetings using Zoom. Every interview was recorded and kept saved. A transcription was made of the records. Ultimately, I forwarded the transcriptions to the educators for their evaluation and potential improvements.

Data analysis process in the main phase of this chapter which includes the triangulation method in Qualitative research design. Transparency in qualitative research is a highly contentious issue, and guidelines to qualitative data analysis outline processes for identifying and analyzing acquired data (Reyes et al.,2022).

The method consists of observations, portfolio assessment and semi-structured interviews. Further, the observations provide the primary and firsthand information of teachers' interactions and behaviors. Moreover, semi-structured interviews offer more in-depth insight about the perception of the ECE teachers and finally, the portfolio assessments, a valuable document which has reflections and events occurred during the teaching and learning practices implementation in the classroom. A detailed grasp of this research study phenomenon is obtained through this triangulation of documents, observation and interviews. It enabled the sophisticated interpretations and reliable findings and conclusion of the study.

### **RESULT AND DISCUSSION**

The data analysis component of every study is essential to the development of a framework within which to create meaningful conclusions based upon the collected data. For the present study, qualitative analytical processes will be employed to evaluate the information collected using numerous different views and perspectives of the researchers involved in this project.

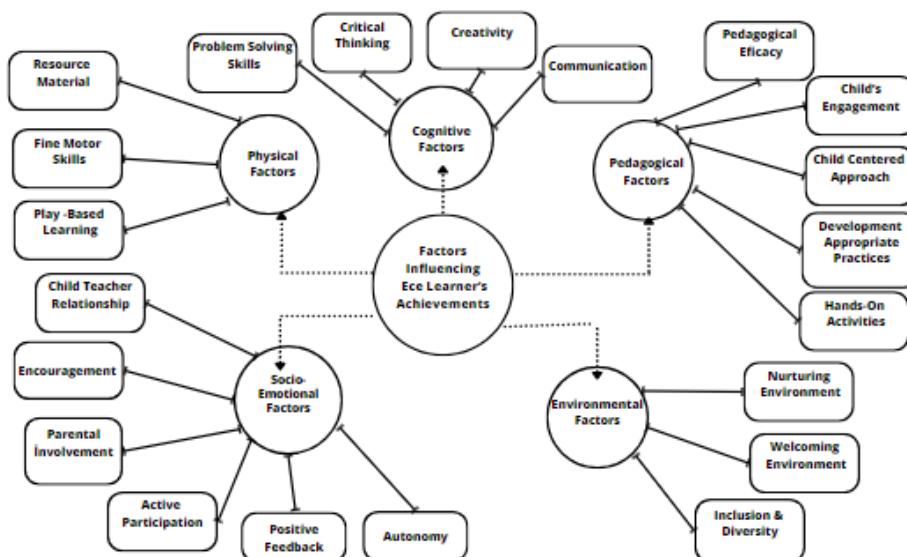
#### **Demographic Overview of Interview Respondents**

Interview Respondents	Designation	Experience
Respondent 1	Headmistress	13 Years
Respondent 2	Home Teacher	10 Years
Respondent 3	Class Teacher	10 Years
Respondent 4	Nursery Teacher	05 Years
Respondent 5	Regional Coordinator	13 Years

## THEMATIC ANALYSIS

The aim of thematic analysis is to patterns and categories throughout the dataset by reviewing the qualitative data with systematic steps.

FIGURE 2



After exploring the several factors through the thematic analysis that impact the students' achievement and performance in early childhood education (ECE), 5 main themes pinpoints, consist of 5 factors: 1. Differential learning, 2. Child psychology 3. Collaborative learning, 4. Classroom environment and 5. Safety and security. These sub-themes provide lens through which insight of the complex variables influencing academic performance and students achievement. There 5 sub-themes in total, each with a five factors and 21 sub-factors, which are revealed by the study.

### Comparison of Theme 1: Pedagogical Factors

The methods and techniques ECE teachers employ to support teaching and learning in early childhood education (ECE) settings are referred as pedagogical factors. These factors have a significant impact that how learners specifically, young develop academically as well as holistically in general. Among the factors and sub-factors, differentiated instructions encourages them to actively participate and engaged themselves effectively in what they are learning. Another factor, enquiring strategy engages students by asking challenging questions. Likewise, Child-centered approach is focused on the child based learning process. Child engagement promotes active participation and enthusiasm in learning process; instructional strategies

matching the developmentally appropriate practices to the child developmental stages. Moreover, practical projects for the child offers opportunity of experimental and project-based learning through hands-on-activities. During the interview, Respondent 1 emphasized the importance of experiential learning and hands-on-activities approach. He expressed “ *okay. So like I have said , more hands-on , experiential learning, this is what I believe in*”. another Respondent no 2 “ *he should be given the freedom to make mistakes in the classroom*”.

This opinion is consistent with the body of research on educational elements, which emphasizes the value of experiential and hands-on learning in encouraging active participation and in-depth comprehension. This viewpoint is supported by the observation data, which show that students were more engaged and participated in classes that included hands-on activities. Respondent 4 discusses the implementation of differentiated instruction, noting,

*“The pedagogies differ from child to child. As I was talking before, our school is working on differentiation a lot. It reflects that the pedagogies that we are applying, these concepts, whatever we are teaching in the classroom are the same. But the concept of level is changed from each other. For the high scorer, the difficulty level kept high as compare to the low achievers with less one. ”*

Besides the differences and difficulty, the study demonstrated that how effective the pedagogical approaches are and plays a key role in promoting the culture of promoting students learning outcomes in the early childhood education environment. similarly, the results if the high achievers indicated high degree of students’ engagement in the classrooms. Moreover, how hands-on techniques, inquiry-based method and tailored instructions are effective to encourage the children active participation and their interest in the learning environment. Furthermore, the close relation between observational data and interview results represented that the way in which instructional components are consistently used shapes the student achievement success. It is still incumbent to address the discrimination in participation opportunities is to guarantee fair chances of learning for each and every student.

### **Comparison of Theme 2: Cognitive Factors**

Cognitive factors are psychological processes consist of learning and development, including critical thinking, creativity & innovation, problem-solving skills and communication. These factors are very critical for promoting cognitive growth and educational success of the young children. Another factor, problem solving is the ability to analyze effectively and address challenges which is also known as skill. Furthermore, critical thinking is among the important factors which involves capacity to evaluate information & data and reaches at the logical conclusion. Lastly, creativity nurtures originality and inventiveness in both thought and expression.

In this regards, during the response, Respondent 1 emphasized the importance of critical thinking and problem-solving skills in fostering the cognitive growth and development of young learners. Similarly, Respondent 2 also put emphasis on the importance of creativity and clear communication in nurturing innovative ideas and expressions during teaching and learning activities in the classroom. Likewise the Respondent 3 reflected the same as the R2 responded regarding the importance of communication and critical thinking in promoting meaningful debate and discussion. Similarly, Respondent 4 endorsed a holistic approach that integrates communication, creativity, critical thinking, and problem-solving skills within the learning

experience for the young children. Respondent 5 indicated the importance of cognitive factors in promoting children's intellectual growth, holistic development and educational success.

During the response to the question, Respondent 3 emphasizes the importance of critical thinking skills, stated:

*"Yes, specific teaching methods. So, letting them explore is the best way, because then it sticks to their mind, that would let them ask questions, and also letting them ask questions. Teacher should use questions start with why, who, what, why, the W questions to cultivate inquiry method in learning. So, the critical thinking of the child can be enhanced, the child thinks and ask questions as well as the child answers, the communication of the child, confidence of the child increases through this method.*

The observations show that if problem-solving abilities, critical thinking, creativity, and communication are encouraged in the young children during the learning process in the classroom, which is also in accordance with Respondents' impressions. In order to promote cognitive growth & development and academic success, teachers are seen encouraging students to think critically, express themselves creatively, and communicate effectively. The practices that have been observed are in line with the cognitive factors that the Respondents have indicated. This indicates that the ECE setting consistently prioritizes the development of cognitive abilities.

### **Comparison of Theme 3: Socio-emotional Factors**

Aspects of learning and development that are social and emotional include cooperative learning, student-teacher connections, expression encouragement, parental participation, affirmative reinforcement, and autonomy. These are together referred to as socio-emotional elements. The socio-emotional health and general academic achievement of young learners are significantly influenced by these elements. Through group problem-solving and idea sharing, collaborative learning encourages students to work together. Positive and supportive interactions between students and instructors are fostered by the child-teacher relationship.

**Encouragement of Expressions:** Establishing a welcoming atmosphere where students feel free to express themselves. Parental Involvement cultivates a cooperative alliance and involves parents in their child's education. **Positive reinforcement:** positive behaviors and accomplishments are reinforced with constructive criticism. Students' independence and self-directed learning are encouraged by autonomy.

The first Respondent highlights the value of positive reinforcement and cooperative learning in fostering student involvement and engagement. Respondent 2 emphasizes the value of parental participation and the relationships between teachers and students in fostering a supportive learning environment. Respondent 3 emphasizes the value of encouraging self-expression and autonomy in order to support young learners' socioemotional development. In order to promote socio-emotional well-being, Respondent 4 supports a comprehensive strategy that incorporates cooperative learning, parent involvement, and teacher-student connections. Respondent 5 promotes the importance of socio-emotional elements in helping children develop healthy connections, their ability to express themselves, and their independence.

Respondent 2 highlighted the significance of positive teacher-student relationships, stated, "Yes, socio-emotional factor and family and relationship with parents and with the teachers and community engagement. These are the factors effect on the educators, early childhood

education." This makes parallel with existing literature on socio-emotional factors, which emphasizes the importance of supportive relationships in fostering emotional well-being and academic success. The observation results support this perspective, as classrooms with positive teacher-student relationships exhibited higher levels of emotional expression and social interaction among students with great enthusiasm.

During the question regarding the importance of teacher in creating effective teaching and learning environment, Respondent 3 underscored the crucial and key role of the teacher in creating a nurturing conducive environment, stating, "*Yes, it has because as a teacher, I am able to present knowledge in a better way, and the children are more excited to receive the knowledge in the pedagogy that I am using.*" This indicated the teacher's role in fostering a supportive classroom climate and surrounding that enhances socio-emotional well-being among students. The observation findings support this assertion, in most frequently, as classrooms with nurturing and creative environments showed higher level of students' engagement and emotional well-being but in some observation this phase is missing.

During the observation, development of interactive communication, healthy relationships, cooperative learning and autonomy of students in classroom. The expression was closely relevant to responses of the respondents. It must be taken in consideration that the teachers cultivate interaction and connections of support with their students, offers affirmative reinforcement and promote self-expression to encourage desired behaviors during the learning. The practices that have been observed exhibit a significant emphasis on socio-emotional variables, underscoring their significance in fostering general well-being and academic achievement in young people.

#### **Comparison of Theme 4: Physical Factors**

In early childhood education physical factors are that support young children's physical development and wellbeing such as learning environment and physical activities. These factors are important in foundation of an atmosphere that foster not only the cognitive but the development of fine motor skills, sensory experiences. And general physical health. On the other hand, classroom environment refers to the setup of classroom and its arrangement including the atmosphere, seating arrangement, learning corners and safety measures taken for the young children. Moreover, the learning resources, and tools for example books, toys and manipulative and age-appropriate materials are readily available and accessible for the young minds. In this perspective fine motor skills activities that advance the cultivating the skills of coordination, hand-eye coordination, and small muscle movements which help the children in physical growth. Engaging Opportunities for children to learn through movement-based activities, active play, and exploration.

For the purpose of to facilitate a variety of learning experiences, Respondent 1 underscores the importance of a well-organized classroom, proper seating arrangements and the availability of resources. Similarly, Respondent 2 emphasizes the value of play-based learning and practical activities in fostering the development of fine motor skills and physical well-being. Respondent 3 emphasizes how crucial it is to establish a welcome, safe space in the classroom that promotes inquiry and active engagement. Respondent 4 is in favors of a comprehensive strategy that supports physical development by combining play-based learning with the development of fine motor skills. Respondent 5 emphasizes the importance of experiential learning and hands-on activities in fostering children's physical health and well-being.

Respondent 1 describe the value of play in developing physical and emotional domain in early years, and said that, "*So, the children express their feelings through play which a language to them. I think that interaction and play is the source of bonding among children .*" this point direct to the latest perspective in literature about physical development of young children. The point was further supported by the observations, that resourceful classes and trained teachers support creating play-based learning environment. Conversely, it was noticed that lack of resources and academic playing are the main obstacles for play based learning.

### **Comparison of Theme 5: Environmental Factors**

Environmental factors include diversity, inclusivity, safety and security, and the general environment of the classroom. Safety and security protocols implemented to guarantee that children are physically and mentally healthy in the classroom. A supportive and compassionate environment that nurtures emotional stability and a sense of belonging is known as a nurturing environment. The physical environment and interactions are designed to provide a welcoming and inclusive atmosphere for all families and children. Diversity & Inclusion encouraging children, families, and communities to value and celebrate their differences in order to foster a sense of belonging and cultural knowledge.

In Respondent 2 discussion of the value of addressing each student's unique requirements in order to foster a positive learning environment, Respondent four stated, "I think that it's the major factor that really affects the academic of a child is catering their needs, the differentiation, the plan, do review... You have to cater the needs, plan your activities according to child's level." This is consistent with the body of research on environmental influences that already exists, which highlights the importance of differentiation in fostering student achievement. The findings of the observations not much support this, in two schools' students performed better and made more progress in classrooms where instruction was customized to meet each student's needs. Although the emphasis on differentiation and meeting individual needs in early childhood education, observations of classroom activities revealed instances in which teachers failed to appropriately address the needs of specific pupils. The observations further aligned the point, supportive, and welcoming learning environment is being promoted. The teachers were very concerned about safety majors and protective environment.

### **Pedagogical Factors**

The plethora of research provides information on a range of pedagogical strategies used in early childhood education (ECE), highlighting both successful and unsuccessful methods. In his analysis of the current instructional strategy used in Pakistan's educational system, Khan (2018) draws attention to its possible shortcomings in promoting the holistic development of children. On the other hand, Kangas et al. (2021) support individualized teaching strategies that are in line with the needs of young learners and highlight the value of pedagogical knowledge in ECE. Furthermore, in order to improve pedagogical effectiveness, Hong & Han (2023) support collaborative knowledge production and reflective teaching methods. These viewpoints highlight the ongoing discussion about the best pedagogical strategies in early childhood education and the significance of constant improvement in instructional techniques.

### **Cognitive Factors**

The literature examines a range of tactics to foster young learners' capacity for critical thought and problem-solving. Cognitive development is a crucial component of early childhood education. Kim (2020) illustrates how crucial it is to give pre-service teachers the chance to use online communication tools to involve children in critical thinking exercises. This is consistent with the wider focus on inquiry-based learning and discovery in early childhood education (ECE) settings to improve cognitive development.

### **Social and Emotional Aspects**

Early childhood education must take socio-emotional elements into account. Research highlights the need of providing inclusive and supportive environments for young learners. Li (2022) argues that in order to foster children's emotional health and sense of belonging, ECE settings should be inclusive and diverse. Churchill & Lippman (2016) investigate how children's functioning and socioemotional development are related, emphasizing the connection between overall achievement and emotional well-being. Furthermore, Birinci (2024) emphasizes how in-service training programs improve instructors' capacity to assist kids' socioemotional development. These results highlight the significance of giving socio-emotional learning in ECE settings equal weight with academic accomplishment.

Early childhood education is greatly impacted by physical factors, which also have an impact on children's general well-being and development of motor skills. According to Ali et al. (2018), play-based learning is crucial for developing young children's physical development and creating a caring atmosphere. In ECEC settings, Jørgensen (2023) emphasizes the importance of play and exploration in promoting holistic growth and development. Even while play-based learning is promoted in theory, observations show differences in actual implementation, with certain classes lacking sufficient equipment and chances for physical activity.

### **Environmental Factors**

Early childhood education students results and children's educational experiences are greatly influenced by the teaching and learning environment. According to Jurayeva (2023), the value of visually appealing and well-maintained classrooms plays a vital role in encouraging young learners to feel comfortable and creative. Tien (2022) demonstrated how important it is to design inclusive, diversified learning settings in the school that meet each child's diverse needs. Nonetheless, there is clear difference between theory and reality, with some classrooms lacking the tools, resources and assistance needed to establish the best possible learning environments for the ECE students. Likewise, Moiza and Sumbal (2022), children can learn more effectively in schools if there are improvements made to the physical, intellectual, and human resources. with the reference to the earlier findings identifying the importance of providing early childhood learners with high-quality learning environments.

Regarding the aims examined in this study, further research is clearly required to improve educators' knowledge efficacy and long-term impacts on children's achievements. Further research in this area may provide insightful information about the effects on children' emotional health, cognitive development, environmental awareness and holistic approach. To expand the understanding and guide instructional strategies, the research suggest that by pursuing the following research avenues for the Future for Different Early Childhood Education Stakeholders:

### **Future Recommendation for School Head**

- Encourage the culture of ongoing professional development practices and innovation by providing the tools and material to the ECE teachers including the novel teaching strategies and cutting-age technologies.
- Encourage ECE teachers to work in collaborative environment as they can exchange of idea, share best-practices and taking proper advantages form the professional development opportunities.
- At first, promote policy efforts and financing that provide the direction for the digital literacy and technology integration in the ECE curricula by guaranteeing all students fair chances to access technological resources.

- To create an inclusive learning environment that embraces diversity, incorporate a range of viewpoints and experiences into lesson plans and classroom activities.
- Give diversity, fairness, and inclusion top priority in early childhood education programs so that all kids may learn in inclusive, culturally sensitive settings.

### **Recommendation For Conducting Experimental Research**

- ECE practitioners and stakeholder must work together to design research studies which can address the current challenges and provide new directions for the researcher to conduct experimental studies.
- For further studies mix method research can be conducted in order to get an in-depth knowledge and it will support to grasping the factors that affecting children academic success.
- Workshops, conferences and professional development programs should be conducted to disseminate the research finding and shared with the all stakeholders and support evidence-based ECE policy and practices.

### **CONCLUSION**

Pedagogical, cognitive, socio-emotional, physical, and environmental aspects in early childhood education (ECE) have been studied and the results provide important new understandings of effective teaching strategies and learning settings. Pedagogically, the significance of customized instruction and reflective methods is pointed out, stressing the necessity of ongoing development and modification in response to changing conceptions of education. Inquiry-based learning, critical thinking exercises, and the development of problem-solving abilities are all highly valued in the field of cognitive development because they help young learners acquire deeper comprehension and autonomous learning. A crucial component of early childhood education (ECE) involves creating inclusive and nurturing environments that embrace variety and foster emotional well-being. Providing teachers with in-service training is essential to improving their ability to meet the socio-emotional needs of their students and establish supportive learning environments.

### **REFERENCES**

Alaçam, N., & Olgan, R. (2023). How do child portfolios enable assessment? Content analysis of portfolios from a Reggio Emilia-inspired preschool and a university preschool in Türkiye and the United States. *Education 3-13*, 1-12. <https://doi.org/10.1080/03004279.2023.2220339>

Ata-Akturk, A., & Sevimli-Celik, S. (2020). Creativity in early childhood teacher education: Beliefs and practices. *International Journal of Early Years Education*, 31(1), 95-114. <https://doi.org/10.1080/09669760.2020.1754174>

Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches. SAGE.

Erradi, O., Khaldi, M., & Khaldi, M. (2024). Teaching infrastructure. *Fostering Pedagogical Innovation Through Effective Instructional Design*, 1-34. <https://doi.org/10.4018/979-8-3693-1206-3.ch001>

Fernandez, C., Hochgreb-Haegele, T., Eloy, A., & Blikstein, P. (2023). Beyond “Having fun” as evidence of learning: A longitudinal case study of a teacher’s evolving conception of hands-on science activities. *Journal of Science Education and Technology*. <https://doi.org/10.1007/s10956-022-10012-1>

Fernández-Santín, M., & Feliu-Torruella, M. (2020). Developing critical thinking in early childhood through the philosophy of Reggio Emilia. *Thinking Skills and Creativity*, 37, 100686. <https://doi.org/10.1016/j.tsc.2020.100686>

Fomba, B. K., Talla, D. N., & Ningaye, P. (2022). Institutional quality and education quality in developing countries: Effects and transmission channels. *Journal of the Knowledge Economy*, 14(1), 86-115. <https://doi.org/10.1007/s13132-021-00869-9>

Fonsén, E., & Ukkonen-Mikkola, T. (2019). Early childhood education teachers' professional development towards pedagogical leadership. *Educational Research*, 61(2), 181-196. <https://doi.org/10.1080/00131881.2019.1600377>

Gantt, B. (2021). *Perceptions of the Reggio Emilia Approach to Early Childhood Education* (Doctoral dissertation, Walden University).

Ghumman, M. S., & Khalid, M. I. (2016). Effectiveness of Teaching Practices for Student's Competencies Development at Early Childhood Education (ECE) Level in Pakistan. *Journal of Research and Reflections in Education*, 10(1), 93-103.

Haddad, L., & da Silva Lira, T. K. (2020). THE HIGH/SCOPE EDUCATIONAL APPROACH IN SUPERVISED INTERSHIP IN EARLY CHILDHOOD EDUCATION: contributions to children and students. *Revista Plurais-Virtual*, 10(3).

Hadley, F., Waniganayake, M., & Shepherd, W. (2019). Contemporary practice in professional learning and development of early childhood educators in Australia: reflections on what works and why. In *Routledge eBooks* (pp. 29–44). <https://doi.org/10.4324/9780203712658-2>

Hagaman, J. L., & Casey, K. J. (2017). Teacher attrition in special education: Perspectives from the Field. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 41(4), 277-291. <https://doi.org/10.1177/0888406417725797>

Hamidovna, M. N. (2020). Modern aspects of pedagogy and psychology in preschool education. *ACADEMICIA: An International Multidisciplinary Research Journal*, 10(12), 1707-1711. <https://doi.org/10.5958/2249-7137.2020.01959.x>

Hanifah, S. (2024). Peran Lingkungan dalam Masa Transisi PAUD ke SD. *Kiddo: Jurnal Pendidikan Islam Anak Usia Dini*, 5(1). <https://doi.org/10.19105/kiddo.v5i1.11576>

Herlina, H., Arafat, Y., & Rahman, A. (2024). The Effect of Training and Competency on Teacher's Performance. *Journal of Social Work and Science Education*, 5(1), 158-171. <https://doi.org/10.52690/jswse.v5i1.693>

Hong, S. B., & Han, J. (2023). Early childhood preservice teachers' learning about children's metacognitive thinking processes and constructivist pedagogy. *Early Years*, 1–16. <https://doi.org/10.1080/09575146.2023.2179960>

Hooper, A. (2016). The influence of early childhood teacher certification on kindergarten and first-grade students' academic outcomes. *Early Child Development and Care*, 188(10), 1419-1430. <https://doi.org/10.1080/03004430.2016.1263623>

Hordern, J. (2024). Teacher professionalism, expertise and the jurisdictional struggle. *Education Inquiry*, 1-16. <https://doi.org/10.1080/20004508.2024.2308945>

Jahan Ara Shams, Muhammad Zafar Iqbal, Bushra Hijazi, & Huma Naz. (2023). EARLY CHILDHOOD EDUCATION IN PAKISTAN: A COMPREHENSIVE REVIEW OF HISTORICAL DEVELOPMENT. *PalArch's Journal of Archaeology of Egypt / Egyptology*, 20(1), 1414-1423. Retrieved from <https://archives.palarch.nl/index.php/jae/article/view/12105>

Javaid, J., & Inam, A. (2015). Learning Environment In Early Childhood Education Centers Of Lahore. *IOSR Journal of Research & Method in Education Ver. II*, 5(3), 2320-7388. <https://doi.org/10.9790/7388-05321926>

Jilink, L., Fukkink, R., & Huijbregts, S. (2018). Effects of early childhood education training and video interaction guidance on teachers' interactive skills. *Journal of Early Childhood Teacher Education*, 39(4), 278-292. <https://doi.org/10.1080/10901027.2017.1408042>

Jones, D. E., Bierman, K. L., Crowley, D. M., Welsh, J. A., & Gest, J. (2019). Important issues in estimating costs of early childhood educational interventions: An example from the REDI program. *Children and Youth Services Review*, 107, 104498. <https://doi.org/10.1016/j.chillyouth.2019.104498>

Jørgensen, H. H. (2023). Encountering children's perspectives in play: How a play experiment with animal cloaks became a research approach in ECEC. *Journal of Pedagogy*, 14(1), 17-36. <https://doi.org/10.2478/jped-2023-0002>

Juma, A. (2004). Improving Practices in Early Childhood Classrooms in Pakistan: Issues and Challenges from the Field. *Contemporary Issues in Early Childhood*, 5(3), 402-407. <https://doi.org/10.2304/ciec.2004.5.3.11>

Jumani, N. B., Rahman, F., Chishti, S. H., & Malik, S. (2011). Teachers training through distance mode in Allama Iqbal Open University (AIOU) Pakistan: A case study. *Turkish Online Journal of Distance Education*, 12(2), 76-90.

Junejo, D., Junejo, N. M., & Shaikh, S. G. (2023). IMPACT OF ECCE TEACHERS TRAINING PROGRAM ON PROFESSIONAL DEVELOPMENT OF IN-SERVICE TEACHERS. *Pakistan Journal of Educational Research*, 6(4). Retrieved from <https://www.pjer.org/index.php/pjer/article/view/942>

Jurayeva, S. (2023). MONTESSORI EDUCATION IN PRESCHOOL INSTITUTIONS. *Modern Science and Research*, 2(8), 278–283. Retrieved from <https://inlibrary.uz/index.php/science-research/article/view/23126>

Kahila, S. K., Heikka, J., & Sajaniemi, N. (2020). Teacher leadership in the context of early childhood education: Concepts, characteristics and enactment. *Southeast Asia Early Childhood Journal*, 9(1), 28–43. <https://doi.org/10.37134/saecj.vol9.1.3.2020>

Kamerman, S. B. (2000). Early childhood education and care: An overview of developments in the OECD countries. *International Journal of Educational Research*, 33(1), 7-29. [https://doi.org/10.1016/s0883-0355\(99\)00041-5](https://doi.org/10.1016/s0883-0355(99)00041-5)

Kamii, C., & DeVries, R. (1993). *Physical knowledge in preschool education: Implications of Piaget's theory*. Teachers College Press.

Kamran Akhtar Siddiqui, Shahid Hussain Mughal, Imran Ali Soomro, & Masood Ahmed Dool. (2021). Teacher training in Pakistan: Overview of challenges and their suggested solutions. *IJORER : International Journal of Recent Educational Research*, 2(2), 215-223. <https://doi.org/10.46245/ijorer.v2i2.91>

Kejo, S. M., & Mwakyusa. (2017). Exploring play in early years education: Beliefs and practices of pre-primary educators in Tanzania.

Khales, B., & Meier, D. (2013). Toward a new way of learning — Promoting inquiry and reflection in Palestinian early childhood teacher education. *The New Educator*, 9(4), 287-303. <https://doi.org/10.1080/1547688x.2013.841504>

Khan, N., & Khan, U. (2021, June). An Exciting Journey of Teaching and Learning; Professional Development of Early Years Teachers. In *RAIS Conference Proceedings 2021* (No. 0056). Research Association for Interdisciplinary Studies.

Khan, S. A., Javed, E., & Maqsood, M. (2023). Effect of Parental Participation in Early Childhood Education in Government School. *Pakistan JL Analysis & Wisdom*, 2, 296.

Khan, M. A. (2018). The status of early childhood education in Pakistan: Inside stories. *Contemporary Issues in Early Childhood*, 19(3), 310-317. <https://doi.org/10.1177/1463949118757049>

Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE guide No. 131. *Medical Teacher*, 42(8), 846-854. <https://doi.org/10.1080/0142159x.2020.1755030>

Kim, & Park. (2018). The Effects of Preschool Teachers' Qualification and Competency on Young Children's Development. International Journal of Advanced Culture Technology, 6, No.4 233-239. <https://doi.org/10.17703/IJACT2018.6.4.233>

Koca, C., (2021). The Opinions of the Early Childhood Pre-service Teachers About Early Childhood Education Approaches. Eurasian Journal of Social and Economic Research (EJSER), vol.8, no.4, 163-173.

Lawrence, B. J., & Sharrock, E. (2021). *Establishing Early Care & Education As a Public Good*. Bank Street College of Education.

Ledford, J., Lane, J. D., & Barton, E. E. (2019). Methods for teaching in early education: Contexts for inclusive classrooms (1st ed.). Routledge. <https://doi.org/10.4324/9781315109800>

Maija Aksela, & Outi Haatainen. (2019, November). PROJECT-BASED LEARNING (PBL) IN PRACTISE: ACTIVE TEACHERS' VIEWS OF ITS' ADVANTAGES AND CHALLENGES [Paper presentation]. International STEM in Education Conference, Brisbane, Australia.

Manning, M., Wong, G. T., Fleming, C. M., & Garvis, S. (2019). Is teacher qualification associated with the quality of the early childhood education and care environment? A meta-analytic review. Review of Educational Research, 89(3), 370-415. <https://doi.org/10.3102/0034654319837540>

Margrain, V., Löfdahl Hultman, A. (2019). Introduction: Content and Context. In: Margrain, V., Löfdahl Hultman, A. (eds) Challenging Democracy in Early Childhood Education. International Perspectives on Early Childhood Education and Development, vol 28. Springer, Singapore. [https://doi.org/10.1007/978-981-13-7771-6\\_1](https://doi.org/10.1007/978-981-13-7771-6_1)

Markowitz, A. J., & Seyarto, M. (2023). Linking professional development to classroom quality: Differences by ECE sector. *Early Childhood Research Quarterly*, 64, 266-277. <https://doi.org/10.1016/j.ecresq.2023.03.007>

Marope, P., & Kaga, Y. (2015). *Investing against evidence: The global state of early childhood care and education*. UNESCO Publishing. <https://doi.org/10.54675/ibqa9325>

Martínez-Bello, V. E., Bernabé-Villodre, M. D., Lahuerta-Contell, S., Vega-Perona, H., & Giménez-Calvo, M. (2020). Pedagogical knowledge of structured movement sessions in the early education curriculum: Perceptions of teachers and student teachers. *Early Childhood Education Journal*, 49(3), 483-492. <https://doi.org/10.1007/s10643-020-01090-0>

Modise, T. (2019). Empowering practitioners through training to ensure safety and health of early childhood development learners. *Early Childhood Development*, 1507-1523. <https://doi.org/10.4018/978-1-5225-7507-8.ch075>

Moiza Abdul Ghafoor, Sumbal Asghar. (2023). Teachers' Perceived Efficacy of ECE Classrooms Learning Environment on Children Learning Experiences in Government Schools in District Sialkot. *JECCE*, 6(1). <https://doi.org/10.30971/jecce.v6i1.19>

Morgan, J., & Sengedorj, T. (2023). Practitioner perspectives on the challenges of implementing 'alternative' early childhood education (ECE) provision for nomadic children in Mongolia. *Children and Youth Services Review*, 147, 106848. <https://doi.org/10.1016/j.childyouth.2023.106848>

Moxnes, A. R., & Osgood, J. (2018). Sticky stories from the classroom: From reflection to diffraction in early childhood teacher education. *Contemporary Issues in Early Childhood*, 19(3), 297-309. <https://doi.org/10.1177/1463949118766662>

Muhammad Jahanzaib, Ghulam Fatima, & Dur e Nayab. (2023). Primary special education for children with vision impairment in Pakistan: Past, present, and futureprimary special education for children with vision impairment in Pakistan: Past, present, and

future. *Pakistan Journal of Educational Research*, 6(2).<https://doi.org/10.52337/pjer.v6i2.783>

Murray, J. (2023). What is the purpose of education? A context for early childhood education. *International Journal of Early Years Education*, 31(3), 571-578. <https://doi.org/10.1080/09669760.2023.2238399>

Murtaza, K. F. (2011). Developing child friendly environment in early childhood education classrooms in Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 1(3), 11. <https://doi.org/10.6007/ijarbss.v1i3.52>

Nadeem, H. A., Saadi, A. M., Fatima, N., & Sahar, N. (2020). PEELI training and professional development of primary school teachers. <https://doi.org/10.31124/advance.13172639.v1>

Nawaz, A., Ashraf, I., & Siddique, A. (2021). Impact of effectiveness of early childhood education on students learning outcomes in Pakistan. *Interdisciplinary Journal of Education Research*, 3(2), 32-39. <https://doi.org/10.51986/ijer-2021.vol3.02.04>

Noorian Far, S. K., Emamjomeh, M. R., Hamidi F., & Assareh, A. (2023). A Comparative Study of High Scope, Reggio Emilia & Waldorf Approaches: Providing Guidelines for Training of Pre-primary Teachers in Iran. *Iranian Journal of Comparative Education*, 6(1), 2350-2370. <https://doi.org/10.22034/IJCE.2022.345758.1410>

Nutbrown, C. (2021). Early childhood educators' qualifications: A framework for change. *International Journal of Early Years Education*, 29(3), 236-249. <https://doi.org/10.1080/09669760.2021.1892601>

Nxumalo, F., Vintimilla, C. D., & Nelson, N. (2018). Pedagogical gatherings in early childhood education: Mapping interferences in emergent curriculum. *Curriculum Inquiry*, 48(4), 433-453. <https://doi.org/10.1080/03626784.2018.1522930>

Ololade Elizabeth Adewusi, Nancy Mohd Al Hamad, Ife Jesuseun Adeleke, Udochukwu Chidiebere Nwankwo, & Godson Chinenye Nwokocha. (2023). Adaptive teaching strategies in early childhood education: A review for Nigeria and the UK. *International Journal of Applied Research in Social Sciences*, 5(8), 255-271. <https://doi.org/10.51594/ijarss.v5i8.575>

Penas, S. T. N. G. (2023). Developing children's soft skills through a design thinking intervention (Doctoral dissertation). <http://hdl.handle.net/10400.26/49093>

Perry, E., & Booth, J. (2021). The practices of professional development facilitators. *Professional Development in Education*, 50(1), 144-156. <https://doi.org/10.1080/19415257.2021.1973073>

Petek, N., & Pope, N. G. (2023). The multidimensional impact of teachers on students. *Journal of Political Economy*, 131(4), 1057-1107. <https://doi.org/10.1086/722227>

Phillips, L. G., Phuong Nguyen, T. T., & Jarrett, M. (2021). Storytelling pedagogy for active citizenship. *Storytelling Pedagogy in Australia & Asia*, 159-180. [https://doi.org/10.1007/978-981-16-4009-4\\_9](https://doi.org/10.1007/978-981-16-4009-4_9)

Pollarolo, E., Størksen, I., Skarstein, T. H., & Kucirkova, N. (2022). Children's critical thinking skills: Perceptions of Norwegian early childhood educators. *European Early Childhood Education Research Journal*, 31(2), 259-271. <https://doi.org/10.1080/1350293x.2022.2081349>

Probine, S., Perry, J., Burke, R., Alderson, J., & McAlevey, F. (2023). An examination of Inquiry-Based project learning in early childhood settings in Aotearoa/New Zealand. *Early Childhood Education Journal*. <https://doi.org/10.1007/s10643-023-01495-7>

Rahman, F., & Hussain, M. (2019). Facilitation and pedagogy in training workshop of early childhood education professionals in open and distance learning. *Journal of Research and Reflections in Education*, 13(2), 294-301.

SHUJA, A., AKHTAR M., & SAIFI, I. L. (2022). Continuous professional development: Performance of primary school teachers. *International Review of Basic and Applied Sciences*, 10(3), 96.

Shumetu Taye, M., Yadesa Kana, F., & Regassa Jekil, T. (2024). Preschool teachers' role and beliefs about developmentally appropriate practice: A systematic literature review. *Center for Educational Policy Studies Journal*. <https://doi.org/10.26529/cepsj.1693>

Siraj, I., Melhuish, E., Howard, S. J., Neilsen-Hewett, C., Kingston, D., De Rosnay, M., Huang, R., Gardiner, J., & Luu, B. (2023). Improving quality of teaching and child development: A randomized controlled trial of the leadership for learning intervention in preschools. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1092284>

Sohil, F., Niaz, U., Rahmani, E. K., & Sohail, M. U. (2022). Early Childhood Education: The Social and Cultural Consequences. *Journal of Positive School Psychology*, 6(11), 2370-2379.

Sokol, Tara A., "TEACHER PERCEPTIONS OF THEIR PREPAREDNESS TO TEACH EARLY LITERACY SKILLS USING DEVELOPMENTALLY APPROPRIATE PRACTICES IN UNIVERSAL PREKINDERGARTEN PROGRAMS" (2024). *Theses and Dissertations*. 689. [https://scholar.stjohns.edu/theses\\_dissertations/689](https://scholar.stjohns.edu/theses_dissertations/689)

Sujatha, S. M., Rani, S. L., & Sangeetha, N. U. (2023). The Exemplary Leadership Qualities Of Teachers. *Journal of Research Administration*, 5(2), 1650-1660. <https://journalra.org/index.php/jra/article/view/372>

Wenden, E., Budgeon, C., Pearce, N., & Christian, H. (2023). Organizational readiness and implementation fidelity of an early childhood education and care-specific physical activity policy intervention: findings from the Play Active trial. *Journal of Public Health*. <https://doi.org/10.1093/pubmed/fdad221>

Whitebook, M., & McLean, C. (2017). Educator Expectations, Qualifications, and Earnings: Shared Challenges and Divergent Systems in ECE and K-12. *UC Berkeley: Center for the Study of Childcare Employment*. Retrieved from <https://escholarship.org/uc/item/7c99d8bd>

Williams, M., & Moser, T. (2019). The art of coding and thematic exploration in qualitative research. *International Management Review*, 15(1), 45. <https://www.questia.com/library/journal/1P4-2210886420/the-art-of-coding-and-thematic-exploration-in-qualitative>

Winther-Lindqvist, D.A. (2017). The Role of Play in Danish Child Care. In: Ringsmose, C., Kragh-Müller, G. (eds) *Nordic Social Pedagogical Approach to Early Years. International Perspectives on Early Childhood Education and Development*, vol 15. Springer, Cham. [https://doi.org/10.1007/978-3-319-42557-3\\_6](https://doi.org/10.1007/978-3-319-42557-3_6)

Young, G., Philpott, D., Butler, E., Maich, K., & Penney, S. (2019). Exploring the impact of quality early child education on special education. *Exceptionality Education International*, 29(3), 6-21. <https://doi.org/10.5206/eei.v29i3.9384>

Zepeda, S.J. (2012). Professional Development: What Works (3rd ed.). Routledge. <https://doi.org/10.4324/9781315386744>