Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality before and after a Professional Development Initiative

Norah Alshbili
M.Ed.

Submitted in fulfilment of the requirements for the award of PhD

School of Language Literacy and Early Childhood Education
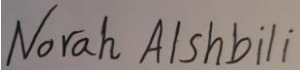
Dublin City University

Supervisors:

Dr. Geraldine French

Professor Pádraig Ó Duibhir

January 2024

Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of PhD is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: *Norah Alshbili*

ID No.: 18210410

Date: 10 January 2024

Acknowledgements

I would like to express my deepest gratitude to my supervisors, Dr. Geraldine French and Prof. Pádraig Ó Duibhir, for their invaluable guidance and support throughout the entire process of completing this thesis. Their expertise, patience, and encouragement have been instrumental in shaping this work.

I would also like to pay tribute to my late father, Hamad. Though he is no longer with us, his unwavering belief in my abilities and his constant encouragement continue to inspire me. I am forever grateful for his love and support.

To my mother, Aida, thank you for your unconditional love and support. Your belief in me has been a driving force behind my accomplishments. Your sacrifices and dedication have shaped me into the person I am today.

To my loving husband, Sultan, I am deeply grateful for your support, patience, and understanding throughout this journey. You have been my rock, providing me with the strength and motivation to overcome any challenges that came my way.

To my children, Nawaf, Hamad, and Danah, thank you for your understanding and for giving me the space and time to focus on my studies. Your presence brings joy and light into my life, and I am grateful for your love and support.

I would like to extend my appreciation to my siblings, Nadia, Nawal, Khaled, Nasser, and Mansour, and to my nephews and nieces. Your support and words of encouragement have meant the world to me.

I must also thank the participants for their valuable time and effort. I am truly grateful to all those who have supported me on this journey. I could not have accomplished this without each and every one of you.

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List of Abbreviations

ABC LD   Arena Blended Connected Learning Design

ECEC   Early Childhood Education and Care

ZPD   Zone of Proximal Development

Abstract

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The interactions children have with those around them are foundational to their learning and development (OECD, 2021). Strong evidence has shown that teacher-child interaction quality is more important for social-emotional and academic development than any other classroom factor (OECD, 2021; Soliday et al., 2019; Tilbe & Gai, 2020). The Vision 2030 national development program seeks to improve early education in Saudi Arabia, but no studies in the country have examined this issue using professional development.

In this study, I investigated nine Saudi kindergarten teachers' perceptions of teacher-child interaction quality before and after a professional development initiative. An Arena Blended Connected Learning Design (ABC LD) was used to create six workshops that provided different types of learning. The workshops focused on five main interaction strategies: questioning, feedback, discussion, problem-solving, and sustained shared thinking. Participants were asked to implement these strategies in their classes. To capture any changes in their perspectives and practices, interviews and focus groups were conducted before and after the 14-week initiative, while participant observations were conducted throughout the initiative.

This qualitative case study was guided by sociocultural theory as a framework. A pilot study tested and developed the workshops and data collection tools before the main study. The findings were generated deductively and inductively using reflexive thematic analysis (Braun & Clarke, 2022). Under each theme, data were triangulated from the pre- and post-initiative interviews, focus groups, and classroom observations.

Teachers' perceptions and practices changed after the initiative. Overall, they reported seeing greater importance in their interactions with children and agreed that preparing a rich environment was a key factor in interaction. However, they pointed out factors preventing them from achieving higher-quality interaction, especially the high ratio of children to teachers and administration requirements. Based on the results, this study offers recommendations for improving teacher-child interaction in Saudi Arabia.

Chapter 1: Introduction

Early childhood education and care (ECEC) is a vital part of society, laying the foundation for later learning and development (Melhuish et al., 2015). As a result, improving ECEC quality is a goal of countries around the world (Early et al., 2017; National Child Care Information and Technical Assistance Center, 2010; Organisation for Economic Co-Operation and Development [OECD], 2021), including Saudi Arabia (Saudi Ministry of Education, 2022). This objective is based on the understanding that quality is needed to maximize the benefits ECEC programs offer to children's early development and learning (Melhuish et al., 2015; Sylva et al., 2007; Vandenbroeck et al., 2018; Yoshikawa et al., 2013). In light of this, teacher-child interactions have emerged as a key feature of ECEC quality and can be defined as the "daily back-and-forth exchanges that teachers and children have with one another throughout each day, including those that are social and instructional in nature" (Hamre et al., 2012, p. 89). Strong evidence has shown that the quality of the interactions children have, or "process quality," is what counts most for their development, learning, and overall well-being (OECD, 2021). More specifically, teacher-child interaction quality is more important for children's social-emotional development and academic skills than any other aspect of classroom quality (Melhuish et al., 2015; Soliday et al., 2019), such as materials, activities (Howes et al., 2008), class size, teacher-student ratio, or teacher education (Mashburn et al., 2008).

The role of teacher-child interactions is reflected in the NAEYC's (2009) position statement that effective teaching is intentional and teachers should employ a variety of strategies to support children's interest and ability in each learning domain. While curriculum is important, the teacher's role is paramount (NAEYC, 2009). According to Yoshikawa et al. (2013), the most valuable characteristics of quality in ECEC, especially kindergarten, are stimulating and supportive teacher-child interactions and effective use of curricula. Yoshikawa et al. suggested that helping teachers implement instructional

approaches through professional development could yield significant benefits. This claim is supported by several studies showing that effective professional development included training on specific skills using a job-embedded professional development model (e.g., Pacchiano et al., 2016; Sheridan et al., 2009). This type of professional development has been shown to improve instruction and learning outcomes in developmental areas, such as literacy (Wasik & Hindman, 2011) and mathematics (Clements et al., 2011). In a systematic review of ECEC professional development, Rogers et al. (2020a) found the professional development models that offered new knowledge and opportunities for teachers to reflect on their practices represented an effective way to improve children's outcomes. Darling-Hammond et al. (2017) reviewed 35 methodologically rigorous studies that also demonstrated a positive link between teacher professional development, teaching practices, and student outcomes. That study found seven widely shared features of effective professional development. These features consisted of focusing on teaching strategies, incorporating active learning, support collaboration, providing models (examples) of effective practice, providing expert support, offering feedback and reflection, and offering adequate time to learn, implement, and practice.

In the present study, I investigate teacher-child interaction quality in a Saudi kindergarten. A relationship was expected between teacher-child interaction quality and the pedagogical strategies teachers used in this setting; furthermore, I expected that professional development could develop teacher-child interaction quality. For this purpose, the researcher designed an initiative using a professional development model focused on improving pedagogical strategies and teacher-child interaction quality. Classroom participant observation, teacher interviews, and a focus group were planned to determine if there were any differences in the teachers' perspectives and practice of teacher-child interaction quality before and after the initiative. A pilot study was undertaken. In the rest of this chapter, I discuss the development of ECEC in general and more specifically in

Saudi Arabia, followed by the study's rationale and aims, the research questions, and the significance of the study.

Development of ECEC Internationally

Caring for and educating children has always been an important role in society (Marope & Kaga, 2015). Arrangements for accomplishing this task have changed over time, with diverse values and norms across cultures, reflecting different family and community structures (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2006). Historically, such arrangements have largely been informal, involving the family, the household, and community members (Marope & Kaga, 2015). Formal ECEC arrangements emerged in the nineteenth century when several countries established kindergartens as educational and day nurseries (Kamerman, 2006). France was one of the earliest countries to integrate kindergarten into its education system in 1886 (Kamerman, 2006). State-led ECEC services first emerged in Russia in the early twentieth century as part of a socialist project to foster women's participation in production in society and to offer education to children from the earliest possible age (Taratukhina et al., 2006). However, the largest expansion of ECEC services came in the 1960s due to women's growing contribution to the labor market and changes in child and family policies in several European countries and the U.S. (Kamerman, 2006).

The reflections of the United Nations Convention on the Rights of the Child (UNCRC) in 1989 turned a new page in the history of ECEC in the 1990s (Marope & Kaga, 2015). This convention formally confirmed that children have the rights to survive, develop, be heard, and take part in decisions that affect them (with consideration of their capacities), stating they are active and competent individuals with rights, ready to learn and develop from birth. The UNCRC explicated children's right to education during the early years beginning at birth and linked this to their right to maximum development. This recognition of ECEC as an essential component of education was part of the major

objectives at the 1990 UN World Conference for Children. Later, this vision of basic

education was confirmed in the Dakar Framework for Action (2000) on Education for All

(EFA), approved as the first of six EFA goals in the World Education Forum, improving

and expanding inclusive ECEC services, particularly for the most disadvantaged children.

Studies have shown higher-quality ECEC yields massive and multidimensional

benefits for individuals and societies (e.g., Melhuish et al., 2015; Sylva et al., 2007;

Vandenbroeck et al., 2018; Van Huizen et al., 2019; Yoshikawa et al., 2013). Therefore, a

strong case based on evidence can be made to consider high-quality ECEC an international

public issue (Marope & Kaga, 2015). Based on this evidence, individuals, governments,

and other organizations should invest in and work together to promote high-quality ECEC

services. Nevertheless, funding for ECEC fails to reflect its importance (Marope & Kaga,

2015).

ECEC in Saudi Arabia

To give an overview of early childhood education in Saudi Arabia, it is important to

mention that formal education in the country did not exist until 1925 (Wiseman et al.,

2008). Before that time, the traditional system was employed, called "khutab." The khutab

method of teaching involved gathering a group of children at a mosque or the teacher's

house to learn how to read and write Arabic and memorize the Quran. In addition to Arabic

and Quranic studies, children would learn religious instruction, moral habits, and

sometimes simple mathematics (Aljabreen & Lash, 2016). After 1925, the government

established the first public schools, but preschool education was not introduced until 1965,

when the first preschool was established in Jeddah by the private sector, and in 1966, the

first public preschool was established by the Ministry of Education (Al-Othman et al.,

2015).

The number of preschool centers quickly increased and more children were

enrolled. Many factors contributed to the need for expanding preschool coverage all over

the country. One of the most significant factors in the growth of preschools was women's growing participation in the labor market. More women in Saudi Arabia now seek to work to support their families or for personal development (Aljabreen & Lash, 2016). Another factor is the growing prominence of the nuclear family and the gradual reduction in importance of the extended family (Al-Othman et al., 2015). In extended family households, the childcare is traditionally given by several members of the family, especially grandparents. In addition to these factors, there is an increasing awareness from the government and the public of the positive outcomes from enrolling children in high-quality preschools.

According to Aljabreen and Lash (2016), "Supervision and management of ECE in Saudi Arabia today is handled by a combination of three organizations: The Ministry of Education, the Ministry of Social Affairs, and the Private Sector," with the Ministry of Education performing the majority of managerial functions (p. 314). Despite the benefits from each organization, having multiple authorities overseeing this area may be problematic. In addition, "all preschools in Saudi Arabia are administrated, supervised, and staffed by women" (Gahwaji, 2006, p. 34). Early childhood in Saudi Arabia is also the only stage where girls and boys can attend the same classes.

While the number of preschools has grown in big cities, in small towns and rural areas, preschools are either unknown or very limited. In addition to a need to increase availability, the curriculum is another issue. According to Gahwaji (2006), "Although the number of preschool centres has increased rapidly, there was no official and suitable curriculum before 1994" (p. 35). In 1984 and 1986, UNESCO held two workshops to train teachers in Saudi Arabia on how children learn. The result was recognizing the need to develop early childhood teachers' skills and provide them with clear guidance. Therefore, the government committed to a comprehensive project to develop the early childhood field. Several organizations cooperated to achieve this goal, including the General Presidency for

Girls' Education (now defunct), the Arab Gulf Program for the United Nations Development Organization (AGFUND), and UNESCO. The project consisted of developing a preschool curriculum based on theories and data regarding the educational development for young children and establishing in-service training centers in three major cities (Alqassem et al., 2016). The curriculum goals were formulated by the Ministry of Education to go along with national education policy. These goals included exposing children to a school atmosphere, preparing them for adult life, and forming relationships with social peers.

"Self-learning" is the name of the public kindergarten curriculum in Saudi Arabia that was first implemented in 1986 (Ministry of Education, 2005). However, a procedural guide and teacher's guide are reviewed and published yearly. This curriculum is a play-based curriculum followed during learning corner time and outdoor play time (Ministry of Education, 2005) and is referred to in the international literature as play-based learning (e.g., Pyle & Danniels, 2017; Edwards, 2017). It is divided into six main units (water, sand, food, house, hands, and my homeland). Each unit takes two to three weeks to complete. In addition, five minor units (my friends, my health and safety, clothes, family, and my book) take one to two weeks to finish. Activities are mainly related to each unit's topics and are prepared by teachers for children to do mostly on their own with minimum interference from the teacher, which is why it is called the "self-learning" curriculum (Ministry of Education, 2005). While this curriculum does value teacher interaction, it puts far greater emphasis on the child's efforts to discover and learn, especially in special learning corners (or centers) and on the playground. In the teacher's guide, the curriculum is described as being based on a self-learning method that focuses on the children's own engagement with the experiences and activities offered so that each child interacts and deals with the targeted educational games available in their educational environment (Ministry of Education, 2005). This helps children discover and develop their abilities at their own

pace. In this way, children learn by themselves and are motivated by their own need to learn (Ministry of Education, 2005).

Various factors influence Saudi children's development and learning experiences. This includes their family background, socio-economic status, cultural heritage, language proficiency, and the educational environment they are exposed to. In Saudi Arabia, only 1% of 3-year-olds, 14% of 4-year-olds, and 37% of 5-year-olds are enrolled in ECEC (OECD, 2023). One of the Ministry of Education's (2021) "most important goals is to raise the rate of children's enrollment in kindergarten to 90% in 2030." Non-Saudi children could account for up to 15% of some public kindergartens, possibly much higher than in private and international kindergartens (Saudi Authority for Data and Artificial Intelligence, 2023). The predominant and official language of Saudi Arabia is Arabic (Algamdi & Nooraldeen, 2002), but there has been a growing number of bilingual children since 2005 (Alzubaidi, 2018). The state religion, Islam, is deeply embedded in the culture and social structure influencing the education system (Alqassem et al., 2016). In addition, numerous changes have shaped the social fabric of the country. For instance, a "rise of individual/family incomes has affected the lifestyle of many Saudi families, particularly the middle and upper classes" (Gahwaji, 2013, p. 336). A factor influencing this trend is more women entering the labor market. The growth in income and women working has also changed the family dynamic, with a move from an extended family structure cohabitating to nuclear families living together. According to Al-Sunbul et al. (2004), families in Saudi Arabia are growing smaller and becoming more independent, distancing themselves from their broader extended family network. Smaller families and a growing female presence in the workplace have impacted childhood education policy and opportunities because young children are more likely to be placed in childcare and education programs or preschool (Gahwaji, 2013).

It is important to give a brief overview of preschool teacher preparation as part of the comprehensive project to develop the early childhood field in Saudi Arabia. As noted by Aljabreen and Lash (2016), 40 years ago, Saudi Arabia was not involved in training its own preschool teachers. Instead, it was common for the country to bring teachers in from neighboring countries, such as Syria, Egypt, Iraq, and Jordan, to teach young children. This began to change in 1983, when the Gulf Girl Association in Saudi Arabia, an organization that provides social and cultural support for Saudi women, offered an associate degree in early childhood education. The "programme offered 64 credits for both theory and practice of ECE and two practicum phases, including [a] full time teacher mentor in preschool" (Aljabreen & Lash, 2016, p. 316). In 1985, King Saud University started offering a bachelor's degree for early childhood teachers, consisting of 165 credit hours of study, including a practicum. Today, many universities and colleges in Saudi Arabia offer early childhood training programs for preschool teachers. As Alqassem et al. (2016) mentioned, 17 out of 24 "public universities offer bachelor degrees in early childhood education" (p. 7), and according to a report by the Ministry of Education (2018), in 2006, 87% of preschool teachers were Saudi citizens.

Rationale and Aims

Early childhood is a pivotal time in the development of a child and may support achievement in formal education later in life (Melhuish et al., 2015). For example, the positive effects of ECEC on children have been shown to last into adolescence (Sylva et al., 2014). For this reason, ECEC quality development is an important strategy to promote young children's learning and development (Egert et al., 2018). Increasingly strong evidence indicates that teacher-child interaction quality is a key factor in ECEC and is critical for improving children's early academic and social-emotional skills (e.g., Early et al., 2017; Howes et al., 2008).

Although quality is a crucial part of ECEC, there is variation in ECEC program quality in terms of teacher characteristics, interaction, the classroom and structural aspects, and the social and cultural context (Alexandersen et al., 2021). As a result, many teachers lack the skills and knowledge needed to support effective learning in ECEC programs (Howes et al., 2008). Their lack of theoretical and practical knowledge about children's development and learning makes them unable to develop their practice to promote children's learning (Stephen, 2012). As a result, teacher professional development has drawn more attention since it may enhance teachers' instructional and interaction quality and, by extension, improve children's learning and development (Darling-Hammond et al., 2017; Egert et al., 2018). Al Shanawani (2023) similarly found that Saudi ECEC program quality varied widely due to factors such as a lack of qualified teachers. A strategy to address these challenges is improving teacher training programs.

A variety of job-embedded professional development approaches—such as workshops, mentoring, and professional learning communities—have been shown to develop teaching and learning (OECD, 2016). Accordingly, this study aimed to design and implement a professional development initiative that could effectively develop Saudi teachers' interaction quality by providing them with theoretical knowledge and practical content in a collaborative learning environment that would offer chances for discussion, feedback and reflection.

Although ECEC is a relatively new field in Saudi Arabia, the government has considerable interest in its development for the reasons outlined above. There have been many recent initiatives to improve and increase the number of quality nurseries and preschool programs around the country (Saudi Ministry of Education, 2022). In Saudi Arabia, "nursery" refers to a childcare program between birth and age 3 and focuses on the care of the child more than early education, while "preschool" or "kindergarten" includes care and instruction for children ages 3–5 (Aljabreen & Lash, 2016). Nursery and

kindergarten are not compulsory and are outside the formal education ladder (Al-Othman et al., 2015).

Saudi Vision 2030 (n.d.-a) aims to leverage the country's geographic, cultural, social, demographic, and economic strengths to reduce the country's dependence on oil revenue and promote a vibrant society and thriving economy. Saudi Vision 2030 (n.d.-b) views education as a critical factor in long-term economic growth. The main educational goals of Vision 2030 are producing higher-education graduates with skills fitting the job market, improving the education system, helping students make suitable career decisions, having five Saudi universities ranked in the top 200 universities in the world by 2030, and having student results in different stages of education exceed international averages around the world by 2030. The plan seeks to achieve these goals by developing and implementing modern curricula, encouraging children to develop their talents, tracking and publishing annual education progress, collaborating with strategic investors and apprenticeship providers, developing new skills by forming councils from different industries and private companies, and developing a central database to track students' development from early childhood through university. Early childhood education is thus seen as a key stage in developing a modern workforce and a knowledge-based economy.

According to the Ministry of Education (2022), the education system can be improved by creating better curriculum objectives and policies and incorporating these and related factors into the education and professional development of teachers. Another key area is fostering a student-centered environment with an emphasis on character qualities, important skills, learner confidence, and creativity. In addition, better education is needed for individuals with disabilities. Finally, more opportunities are needed for kindergarten, which should be connected to the formal education system.

High-quality ECEC services need to be available and affordable to allow women and men with care responsibilities to contribute to the labor force; this is because women's

employment improves the socio-economic situation of their family as well as the economic growth of society (Penn, 2009). This need is especially relevant in Saudi Arabia as the country's economy and society undergo changes to diversify the economy under the Saudi Vision 2030 project. One of the ways the project seeks to accomplish this goal is by empowering women, strengthening their role as leaders, increasing their participation in the labor force, establishing promising sectors for women to work in, and reducing gender-related challenges (Saudi Vision 2030, 2019b).

To achieve the goals of Saudi Vision 2030, the National Transformation Program was launched in 2016 (Saudi Vision 2030, 2019a). In the beginning of 2016, this program collaborated with the Ministry of Education to assess the challenges facing the public education system, such as quality and performance indicators. This collaboration resulted in the National Transformation Program's educational realization initiative to come up with objectives for education. Objectives related to early childhood education, according to the Ministry of Education (2023), include offering high-quality, fair, inclusive education for all students; offering professional development to teachers; providing an educational environment that stimulates innovation and creativity; improving curricula, teaching methods, and assessment; and improving students' values and skills.

A review of research on the effects of ECEC on child development suggested that investing in universally available high-quality ECEC can benefit governments, children, families, and communities (Melhuish et al., 2015). According to a report by the World Bank Group, the Inter-American Development Bank, and UNICEF (2018), "Investing in early childhood development is widely recognized as a cost-effective strategy for fair and sustainable development" and studies have increasingly shown "that the returns on investment in young children are substantial, particularly when compared to investments made at later stages in life" (p. 4).

Numerous ECEC studies have shown that well-implemented interventions enhance children's development of cognitive, language, and academic skills, which play a vital role in future educational, social, and emotional development (Melhuish et al., 2015; Wylie et al., 2006). Research seeking to assess and improve ECEC has increasingly focused on quality (Sheridan, 2009), and a growing number of studies have presented the benefits of high-quality ECEC on children's development (Slot et al., 2015). In addition, studies have demonstrated teacher-child interaction as critical to children's learning and development in terms of language, literacy, cognition, socioemotional development, and self-regulation, including the National Institute of Child Health and Human Development and the Early Child Care Research Network (Pianta et al., 2009).

Therefore, teacher-child interaction is a key factor in classroom quality and children's social development and competence in school (Hamre & Pianta, 2007). In light of this, the present study has focused on teacher-child interaction quality as a key factor in childhood education. To achieve Saudi Vision 2030's goals, it is vital to improve the quality of ECEC through developing teacher-child interaction quality. The aims of the present study were as follows:

1. Explore teachers' perceptions of teacher-child interaction quality.

2. Design a professional development model to improve teacher-child interaction quality in a Saudi kindergarten.

3. Explore what factors enable and constrain quality interactions.

4. Explore teachers' perceptions of effective professional development for developing teacher-child interaction quality.

5. Explore teacher-child interaction quality in a Saudi kindergarten.

Research Questions

To achieve the objectives outlined above, the study adopted a sociocultural lens to analyze the data. The primary research question that guided this study asked, "How do Saudi early

childhood education teachers perceive teacher-child interaction quality?" This main question was divided into five sub-questions:

1. How do teachers perceive their practices related to teacher-child interaction quality before the professional development initiative?

2. How do teachers perceive their practices related to teacher-child interaction quality after the professional development initiative?

3. Have any changes emerged in teachers' pedagogical strategies as a result of the professional development initiative?

4. What factors enable or constrain quality interactions according to teachers?

5. How do teachers perceive the professional development initiative as a tool to improve the quality of their interactions with the children in their classes?

Significance of the Study

All education systems have standards and requirements for ECEC, and most have professional development for ECEC teachers (National Child Care Information and Technical Assistance Center, 2010), with Saudi Arabia being no exception (OECD, 2020b). Professional development workshops often offer a variety of topics to help ECEC teachers fulfill education system requirements. However, a lack of understanding of ECEC as a career requiring professional development can lead to challenges for kindergarten teachers when participating in professional development (Peterson & Valk, 2010).

Despite its potential benefits, improving teacher-child interaction quality by combining strategies is a new concept in Saudi Arabia in research and practice. I have sought to address that gap by providing further evidence on the duration, frequency, and intensity of professional development in ECEC in a Saudi context. As such, this is the first study to examine the effect of professional development on Saudi ECEC teachers' perceptions and practices regarding teacher-child interaction quality. The initiative was specially designed by the researcher for this environment using the Arena Blended

Connected Learning Design (ABC LD) through the lens of sociocultural theory. The literature supports the value of employing this type of job-embedded professional development guided by an academic researcher acting as a mentor/trainer (cf. Cummins, 2004; Onchwari & Keengwe, 2008; Rogers et al., 2020a, 2020b).

This initiative is a direct response to the researcher's own "felt need" (Elliot, 1991). My ontogenesis (Wertsch, 1988) as an educator and researcher, along with other varied professional experiences in Saudi Arabia and the U.S. has led me to identify teacher-child interaction quality as critical for children's developmental and learning outcomes (Melhuish, 2015; OECD, 2019; Soliday Hong et al., 2019). I worked as a kindergarten teacher in Saudi Arabia before pursuing an MA in the U.S. and working with children in American ECEC settings as a practicum student and researcher. During that time, I wrote several papers about early childhood education. Since then, I have gained experience as a lecturer at Princess Nourah University in Riyadh and have supervised undergraduate students in several public and private kindergartens. Because Saudi teachers receive almost no professional development targeting teacher-child interaction quality, I introduced an initiative based on high-quality professional development practices as supported by the literature.

There is growing interest around the world, including Saudi Arabia, in raising the quality of ECEC by developing teachers' knowledge and skills (Al Shanawani, 2023). Rogers et al. (2020b) stressed the importance of improving the pedagogical knowledge, understanding, and skills of ECEC teachers through accessible, effective professional development programs. The current study aligns with this global trend in ECEC research by offering specially designed on-site professional development.

Structure of the Study

My primary focus in this study was to explore teachers' perceptions of teacher-child interaction quality and investigate whether their practices underwent any changes after

they participated in a professional development program in a Saudi kindergarten. The entire research process was guided by Vygotsky's sociocultural theory, which served as the foundation upon which the data were analyzed and understood (see Osanloo & Grant, 2016).

In this chapter, I introduced the context of the study, discussing the development of ECEC in general and in Saudi Arabia. I outlined teacher-child interaction quality and a significant gap in studies on this issue in a Saudi context, particularly regarding the positive role of professional development. Furthermore, my personal experience led me to examine this issue because I noticed that teachers in Saudi Arabia lacked an awareness of how teacher-child interaction quality could shape children's learning and development. This lived experience of the issue is mirrored in the literature (e.g., Downer et al., 2010a; Early et al., 2017; Hamre, 2014; Hamre & Pianta, 2007; McNally & Slutsky, 2018; Melhuish et al., 2015; Siraj-Blatchford & Sylva, 2004; Wylie et al., 2006).

In Chapter 2, I present the literature that shaped the current study. I first analyses the salient theories associated with teacher-child interaction quality and professional development. ECEC quality is explored, focusing on teacher-child interaction quality and its importance for children's learning and development. Five interaction strategies are likewise examined: questioning, feedback, discussion, problem-solving, and sustained shared thinking. These are research-based teaching strategies in ECEC derived from different cultural contexts and informed by the sociocultural theory that guided this study, mainly the ZPD (Vygotsky, 1979) and scaffolding (Wood et al., 1976). All of these strategies rely on social interaction and strong relationships between the teacher and child (Siraj-Blatchford et al., 2002).

In addition, the chapter examines the literature regarding different models and characteristics of ECEC professional development that helped the researcher design the initiative employed in this study.

In Chapter 3, I detail the methodology of the study, including the research objectives, sampling procedures, and instruments. A qualitative (case study) approach to data collection was deemed optimal for this small-scale investigation, which enabled me to arrive at substantial conclusions in order to answer the research questions. I explain the research design in detail, the design of the professional development initiative, and ethical considerations. The limitations of the study are also briefly acknowledged.

In Chapter 4, I present and discuss the data under six themes, which are analyzed in conjunction with the theoretical framework and literature evaluated in Chapter 2. Those themes are the implementation of the self-learning curriculum, play-based learning and intentionality, teachers' perspectives on their role in supporting children's learning and development, the learning environment, factors affecting teacher-child interaction quality, and teachers' reflections on the initiative.

In Chapter 5, I conclude the study by synthesizing the primary findings, noting the limitations of the study, and outlining the study's contributions to current knowledge. This is followed by recommendations for policy, pedagogy, and research.

<center>**Chapter 2: Literature Review**</center>

Introduction

In this chapter, I review relevant literature and theories. I first describe the literature search strategy, ECEC quality, and teacher-child interaction quality as a key factor of ECEC quality. I then review two related theories with a focus on sociocultural theory, which formed the theoretical framework of this study. After that, I explore learning environment and its effect on the quality of teacher-child interactions. Next, I detail the five interaction strategies of high-quality ECEC that were employed in the initiative (questioning, feedback, discussion, problem-solving, and sustained shared thinking), as well as two supporting practices (planning activities based on children's interests and encouraging children's persistence). After that, I discuss two teaching approaches in ECEC that can help achieve higher-quality teacher-child interaction: play-based learning and intentional teaching. Various factors affecting teacher-child interaction quality are also discussed. This is followed by a section on the relevant professional development literature. I conclude with an overview of the initiative's design, professional development, and the theoretical framework.

Literature Search

A review of the literature began by identifying key topics in the field of study. A keyword search was conducted using several databases: EBSCOhost (Education Research Complete, and British Education Index), ProQuest (including 16 databases), Scopus, Sage Journals, and Google Scholar. This initially involved searching online databases for books and articles using key search terms, including teacher-child interaction, teacher-child interaction quality, early childhood education quality, professional development, teacher training, interaction methods, interaction techniques, interaction strategies, teaching methods, teaching techniques, and teaching strategies. Books were retrieved from the central library at Princess Nourah Bint Abdulrahman University. Additionally, the

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researcher searched extensively through the references and footnotes of identified articles and books to locate further relevant studies.

Following an initial screening, which excluded material unrelated to the topic of this review, a large number of studies were retained, and full-text articles were examined. Due to the large volume of results, specific inclusion and exclusion criteria were established to further limit the search and identify relevant studies. This review, in turn, informed the structure of this chapter. The inclusion and exclusion criteria are presented in Table 2.1. I independently screened the full-text documents yielded by the search against these criteria.

Table 2.1: Inclusion and Exclusion Criteria for Literature

Attribute	Inclusion Criteria	Exclusion Criteria
Publication type	Peer-reviewed journal	Material not in a peer reviewed journal
Language	English or Arabic	Not in English or Arabic
Type of study	Contains primary empirical evidence, including meta-analyses	Does not contain primary empirical data, e.g., literature reviews
Key components of study	Focuses on early childhood education quality, teacher-child interaction quality, or professional development in ECEC and its impact on teacher-child interaction quality (when available)	Does not focus on any of these elements

ECEC Quality

In order to provide high-quality ECEC, it is necessary to define what high quality entails. Unfortunately, there is no universally agreed standard. A major reason for this is that quality within this context is a construct "based on values, beliefs and interests, rather than on objective and universal reality"; therefore, different stakeholders have different definitions for what constitutes high-quality ECEC (Pence & Moss, 1994, p. 172). As a result, policymakers should consider the varying perspectives of stakeholders, such as parents, teachers, children (Ceglowski & Bacigalupa, 2002; Layzer & Goodson, 2006), researchers, and other professionals (Ceglowski & Bacigalupa, 2002). These perspectives are discussed later.

Importance of High-Quality ECEC

Numerous longitudinal studies have demonstrated the benefits of high-quality ECEC in the short- and long-term (e.g., Adams et al., 2007; Camilli, 2010; Melhuish et al., 2008; Melhuish et al., 2015; Nores & Barnett, 2010; OECD, 2021; Wylie, 2006). Internationally, there is increasing interest in ECEC due to the expanding body of studies that show the benefits of participation in high-quality ECEC for children and by extension society (Melhuish et al., 2015; Vandenbroeck et al., 2018). For example, the EPPSE longitudinal study in the UK, involving over 3,000 children, showed that any participation in ECEC, longer duration of this participation, and better quality of ECEC settings all strengthened children's holistic learning, development, and well-being, beyond individual and family background characteristics (Sylva et al., 2004). Another example is a meta-analysis by Van Huizen and Plantenga (2018) that evaluated the effects of ECEC on children's outcomes from 2005 to 2017 in various countries, including Australia, Canada, France, the U.K., Germany, Spain, and the U.S. The findings showed that high-quality ECEC led to stronger outcomes.

Learning is a gradual process, and a strong foundation early on in ECEC facilitates educational success and competence in later stages (Council of the European Union, 2019). Children who participated in ECEC for more than a year, for instance, achieved higher scores in language and mathematics in the Progress in International Reading Literacy Study and Program for International Student Assessment.

Furthermore, ECEC plays an important role in preparing children to live in heterogeneous societies, as it can strengthen social unity. For example, ECEC can be a meeting place for families from different backgrounds, and through social-emotional daily learning, it can help children learn how to be empathic and learn about their rights and others' rights, such as equality, tolerance, and diversity in society (Council of the European

Union, 2019). This role of ECEC is thus an important element of the Saudi Vision 2030 project, as one of its themes is to promote a vibrant society (Saudi Vision 2030, 2019a).

ECEC has shown the highest returns on investment out of all stages of education, with those returns more pronounced for children from a disadvantaged background (Council of the European Union, 2019). In their annual review of economics, Heckman and Mosso (2014) stated that evidence from recent studies on the economics of human development and social mobility emphasized the importance of early childhood experiences in shaping various life skills. However, ECEC is only a good investment if those services are of high quality (Penn, 2009). Low-quality ECEC services may harm children's development and later performance, especially children from disadvantaged backgrounds.

Perspectives on Quality

Different perspectives focus on different aspects of quality, including those of parents (Ceglowski & Bacigalupa, 2002; Ishimine & Tayler, 2014), teachers (Ishimine & Tayler, 2014; Layzer & Goodson, 2006), researchers (OECD, 2006), governments (e.g., Saudi Vision 2030, n.d.-a), and children (Katz, 1993; Layzer & Goodson, 2006). For example, parents' perspectives may focus on the safety of the kindergarten, their trust in the teachers, whether the environment meets the needs of their child, and how the kindergarten or childcare center helps prepare the child for school. Parents may also consider the degree to which the kindergarten or center meets their employment needs, e.g., working hours and offering the options for full-day/half-day (Ceglowski & Bacigalupa, 2002; Ishimine & Tayler, 2014).

ECEC teachers' perspectives, on the other hand, may focus more on the conditions of employment. They take into account factors such as suitable wages and benefits, communication quality with management, hours, training and professional development,

work environment, and teacher-child ratios (Ishimine & Tayler, 2014; Layzer & Goodson, 2006).

Children's perspectives may focus on whether the environment is safe, secure, and nurtures their healthy development (Layzer & Goodson, 2006). Criteria of quality from their perspective include children's feelings that they belong and are welcome, accepted, understood, protected, and addressed seriously and respectfully, as well as whether activities are engaging, challenging, meaningful, and satisfying (Katz, 1993). In recent years, research has tended to take the child's perspective more into account (Layzer & Goodson, 2006).

Another perspective is that of researchers and other professionals, who tend to focus on structural variables (e.g., facility, teacher-to-child ratios, teacher qualifications) and process variables (e.g., the nature of interactions, pedagogy) (OECD, 2006). In contrast, governments and policymakers often view high-quality ECEC as whatever works best for the needs of the country (Harrist et al., 2005). The Saudi government, for instance, views education as an investment in the future and wishes to improve ECEC, curriculum, and educator training (Saudi Vision 2030, n.d.-a).

Based on the literature, this study defined ECEC quality as being when a program optimizes the child's learning and promotes development in all areas (cognitive, social, emotional, language, and fine and gross motor skills). Such a program has certain characteristics facilitating quality, which are explained in the next section.

Characteristics of ECEC Quality

Despite the lack of a universal definition, several organizations and studies have identified essential elements in preschool programs that produce sustained, reliable outcomes in children and their families (Hayakawa & Reynolds, 2014). Research and input from educators (e.g., Hayakawa & Reynolds, 2014; Melhuish et al., 2015; National Association for the Education of Young Children [NAEYC], 2019; Weisenfeld et al., 2018) as well as

large-scale studies, such as the Effective Provision of Pre-School Education and Researching Effective Pedagogy in the Early Years in Europe (Siraj-Blatchford et al., 2002; Siraj-Blatchford & Manni, 2007; Sylva et al., 2004), have recommended basic standards for ECEC quality related to environment, curriculum, relations with community and families, and teachers. Below, 10 major characteristics of ECEC quality are described.

First, the programs should implement systems, procedures, and policies that support stable staff and management to ensure all children, families, and staff have high-quality experiences (NAEYC, 2019). Effective administration, knowledgeable leaders, and functional policies and procedures are necessary to structure a quality ECEC program and maintain that quality over time (Melhuish et al., 2015; NAEYC, 2019; Weisenfeld et al., 2018). Such policies should ensure teachers are well-compensated (with pay parity at all stages of K-12).

Second, ECEC programs should implement curriculum that helps them achieve their goals and promote all development areas (emotional, social, physical, language, and cognitive) (Hayakawa & Reynolds, 2014). A well-planned curriculum offers direction for teachers and administrators, helping them cooperate and plan activities to maximize learning (NAEYC, 2019). Programs can design their own curriculum or choose any curriculum that meets the program goals and NAEYC standards.

Third, ECEC programs should use teaching approaches that are developmentally, culturally, and linguistically appropriate and promote each child's development and learning experience in the context of the curriculum goals (Hayakawa & Reynolds, 2014; Melhuish et al., 2015). In this sense, approaches must be age-appropriate and support children with special needs and bilingual children (Weisenfeld et al., 2018). Each child has different learning styles, interests, capacities, needs, and backgrounds. Teachers can help children learn by knowing these differences and using teaching approaches suitable for each child (NAEYC, 2019).

Fourth, ECEC programs should use ongoing systematic informal assessment methods to assess children's learning and development (Hayakawa & Reynolds, 2014). Assessment (i.e., documenting children's learning) helps teachers plan appropriate activities to meet all children's strengths and needs, identify children who have disabilities, and guarantee they receive needed services and help (NAEYC, 2019). Fifth, programs should care about children's nutrition and health and protect children and staff from illness and injury (Hayakawa & Reynolds, 2014; Melhuish et al., 2015). Children need to be healthy and safe so that they can learn and grow (NAEYC, 2019).

Sixth, to promote children's development and support families' interests and needs, ECEC programs should employ and support teachers and other staff who have educational qualifications, degrees in ECEC, and a professional commitment to the field (NAEYC, 2019). Teachers specialized in the field are more likely to encourage positive interactions and richer language experiences. Such abilities should be maintained and enhanced by offering ongoing assessment, professional development, and training to ensure quality continuity, stability, and improvement (Melhuish et al., 2015).

Seventh, ECEC programs should establish collaborative relationships with all children's families to promote their development in all settings (Hayakawa & Reynolds, 2014). Relationships with families consider each family's composition, language, and culture. Programs need to create these relationships based on trust and respect and encourage families to participate in the program's activities (NAEYC, 2019). Eighth, on a related note, ECEC programs should establish relationships with the children's communities and use available resources in those communities (Hayakawa & Reynolds, 2014). Relationships with the community help the program achieve its goals and help families find resources to promote children's healthy development (NAEYC, 2019).

Ninth, ECEC programs should have an indoor and outdoor physical environment that is safe, properly equipped, and well organized and maintained (Hayakawa &

Reynolds, 2014). This environment should contain facilities, equipment, and materials that facilitate learning and development (NAEYC, 2019). Children's direct experiences are a fundamental characteristic of quality, including the ways teachers organize routines, choose and prepare lessons and activities, and bring interesting materials to the classroom (Hamre & Pianta, 2007).

Tenth is the promotion of positive relationships among children, teachers, and other staff. However, the most fundamental relationship is that between teachers and children. Teachers should nurture children's sense of individuality, worth, belonging, and ability to participate in the community, and teachers' interactions with children should be responsive, affectionate, and readily available (Melhuish et al., 2015; NAEYC, 2019). A fundamental consideration in this regard is whether class size and teacher-child ratio allow appropriate interaction (Melhuish et al., 2015). Classes should not exceed 22 children, with at least two teachers in each kindergarten classroom and no fewer than one teacher per 11 children (Weisenfeld et al., 2018).

Large-scale studies (e.g., Siraj-Blatchford et al., 2002; Siraj-Blatchford & Manni, 2007; Sylva et al., 2004) have found that major ECEC quality characteristics included strong leadership, warm interaction, open-ended questioning, formative assessment, adults supporting children's learning, talking through conflicts, and using appropriate content (Siraj-Blatchford & Manni, 2007). The similarity of principles across organizations and studies in different regions reflects general agreement among researchers, educators, policymakers, and practitioners as to what elements are necessary for children's development in terms of cognitive and socio-emotional well-being (Hayakawa & Reynolds, 2014).

Melhuish et al.'s (2015) review of a large body of international research found the following ECEC quality characteristics crucial in fostering children's development: responsive, affectionate, and immediately available teacher-child interaction; well-trained

teachers dedicated to working with children; developmentally appropriate curriculum; teacher-child ratios and group sizes that enable teachers to interact with children appropriately; supervision that ensures consistent high-quality ECEC; professional development that promotes consistency, stability, and quality improvement; and accessible facilities that are sanitary and safe.

Teacher-Child Interaction Quality as an Indicator of High-Quality ECEC

Children experience the world as an environment of relationships that influence almost all aspects of their development (National Scientific Council on the Developing Child, 2004). Building on the discussion above, children who experience positive relationships with teachers are more motivated to learn, are more excited about going to school, show more self-confidence, and learn more in the classroom, resulting in strong outcomes that continue into adolescence (Clarke-Stewart et al., 2002). Children gain access to educationally rich activities and materials through their teachers (Hamre, 2014; Hamre & Pianta, 2007; McNally & Slutsky, 2018; Melhuish et al., 2015), developing through their experiences with adults and peers (Leyva et al., 2015; Vygotsky, 1979). Numerous studies have demonstrated teacher-child interaction as critical to development (Downer et al., 2010b; National Institute of Child Health and Human Development and Early Child Care Research Network, 2005; Pianta et al., 2009).

Within the global concept of ECEC quality, teacher-child interactions have arisen as a key factor promoting early academic and social-emotional development. For example, Howes et al. (2008) stated that sensitive teacher-child interactions centered around instructional content within a positive setting were a bigger predictor of language and literacy outcomes than materials or activities. Mashburn et al. (2008) viewed instructional support—or teacher-child interaction quality specific to instruction (essential elements of process quality)—as a stronger predictor of children's academic outcomes than structural features of quality.

Based on Hamre et al. (2012) and Howes et al.'s (2008) definitions, teacher-child interactions are sensitive daily social and instructional exchanges within a positive environment. Siraj-Blatchford et al. (2002) referred to them as pedagogical interactions, defined as "face to face interactions practitioners engage in with children [that] may take the form of cognitive or social interactions" with pedagogical strategies defined as "practices which support learning, for instance, social interactions, assessment, the organisation of resources or management" (p. 7). These concepts are further explained below.

Teacher-child interaction has been widely acknowledged as a key factor in classroom quality and a main contributor to children's social development and competence in school (Hamre & Pianta, 2007). An increasingly common way of studying this interaction is observation of high-quality teaching as a socially interactive process (Hoang et al., 2018). Previous studies have shown positive outcomes associated with the quality of such interaction in kindergarten classes (Burchinal et al., 2010). In the case of young children, social and emotional characteristics of learning are equally valuable to instructional learning (Denham et al., 2014). Several studies have supported this position; for example, some found more time was spent in ECEC classrooms on non-instructional activities, e.g., breakfast time, than instructional activities, e.g., story time (Downer et al., 2010a). These characteristics of quality have greatly informed how the researcher in the present study defined, understood, and approached the target characteristics of teacher-child interaction.

Teachers' Role in High-Quality ECEC

As noted above, early childhood teachers play a critical role in providing high-quality care and education to young children. Early childhood programs require teachers to fulfill a variety of roles, such as developing relationships with children, families, and communities; implementing developmentally appropriate and culturally responsive curriculum; using

assessment to guide instruction and monitor progress; supporting children's social-emotional development and well-being; and providing a safe and healthy learning environment (AGDE, 2022; NAEYC, 2022).

Of the various roles teachers play in high-quality ECEC programs according to the literature, the following are discussed in the present study: supervision (monitoring), facilitating friendship among children, behavior management, and supporting language development. Preparing the learning environment is another major role but is discussed separately in the learning environment section.

Supervision (monitoring) children. Historically, ECEC policies have concentrated on establishing standards to ensure the safety of children, such as the standards and requirements for buildings, materials, or teacher-to-child ratios (OECD, 2021). Early childhood organizations agree that maintaining the safety of the child physically and psychologically is essential in any early education setting (AGDE, 2022; NAEYC, 2022).

Teachers' active supervision plays a crucial role in maintaining a safe environment and fostering learning outcomes (Australian Children's Education and Care Quality Authority, 2018). The implementation of efficient supervision is crucial in establishing environments that prioritize safety and responsiveness to the diverse needs of children.

To effectively supervise groups of children, teachers must conduct risk assessments and make professional judgments, considering the environment, children, and the context of the activities (Australian Children's Education and Care Quality Authority, 2018). Observing children's play and anticipating potential dangers allows educators to assist them as difficulties arise and intervene when necessary.

In one study, teachers in ECEC prioritized supervision of children during outdoor time (Coleman & Dyment, 2013). Teachers had different interpretations of their supervision duties, including standing back, monitoring safety hazards, interacting with

children in their play, noticing if any child needed help, making sure they were engaged in activities, and helping excluded children find opportunities to engage in play with other children. Due to the features of an outdoor environment, such as climbing equipment and bikes, some teachers might perceive their main role during outdoor playtime as supervising and ensuring the safety of children.

Active supervision includes reminding children about the rules of the kindergarten and encouraging them to follow those rules (Beazidou et al., 2013; NAEYC, 2022). This is essential to have a positive learning environment and to help children understand what they can expect from themselves and other children in the class. In this context, teachers should define appropriate behavior by setting limitations on how children behave in the classroom.

Facilitating friendship. Peer interactions play a crucial role in children's development, helping them acquire and enhance social-emotional, language, and cognitive skills (Rubin et al., 2011). Supporting young children's peer relationships, particularly friendships, is important because of the strong connection between social-emotional development and other developmental domains (Denham & Brown, 2010). Lack of friendships can lead to deficits in learning achievement, increased anxiety, depression, and social withdrawal (Berndt, 2004).

Early childhood teachers can facilitate friendship when "they design opportunities that promote peer engagement, help children sustain and enhance play, and help children resolve conflict" (NAEYC, 2022, p. 11). In the same vein, Kemple (2004) and Tan and Perren (2021) emphasized the importance of providing activities that promote positive social interactions among young children, as well as the impact of supportive adults in facilitating social skill development and creating a welcoming and inclusive environment for all children.

An early childhood teacher's role in facilitating friendships includes creating an encouraging classroom environment for children to play with their peers, supporting children, helping children maintain and enhance play experiences, and helping them deal with any conflicts that arise during social interactions (Kemple, 2004; Tan & Perren, 2021).

Behavior management. In high-quality ECEC, the teacher's role regarding behavior management includes solving children's behavioral problems, working with families to solve problems, and recognizing children's feelings and how they express those feelings (NAECY, 2022). Arumugam et al. (2020) warned that if behavioral issues in children are not treated, they can lead to more serious, disruptive problems. A proven method to help at-risk children is early identification using effective positive behavior support. In this context, teachers should respond to challenging behaviors with calmness and respect while ensuring the emotional and physical safety of all children and adults present in the classroom (NAEYC, 2022). To this end, teachers should avoid using negative responses such as "stop doing this" or "no running" when guiding children; instead, they should focus on teaching appropriate social, communication, and emotional regulation skills; providing support and guidance to help children develop alternative behaviors; and setting realistic expectations appropriate for their age (NAEYC, 2022). Non-punitive practices tend to be more effective, such as classroom rules, encouraging children to be responsible, and encouraging them to discuss topics involving behavior, emotions, or situations of concern (Beazidou et al., 2013).

Classroom management is a central component of teaching that involves strategies to engage children and limit disruptive behaviors. Teachers often incorporate methods such as cooperative group activities to facilitate class management and decrease behavioral problems (Chen et al., 2021). Teacher-child relationships are an important factor in classroom management. These relationships refer to the quality and experience of the

teacher-child bond, including safety, support, and collaboration. Positive teacher-child relationships could reduce problematic behavior and increase engagement in learning. Teachers' perceptions and attitudes toward children's behavior could also influence classroom climate. Overall, the teacher-child relationship has shown a direct influence on children's academic engagement, classroom behavior, and social-emotional development.

Supporting language development. Teachers play a critical role in supporting children's language development by providing rich opportunities for interactive and responsive conversations. High-quality teacher-child interactions are associated with better language development and other positive outcomes (Mashburn et al., 2008; Sylva et al., 2008). These findings aligned with multiple studies suggesting a positive relationship between the quality of teacher-child interactions in early childhood education and children's language development, such as receptive vocabulary competency (Yang et al., 2021).

Teachers who provide frequent, varied, and responsive language interactions can enhance children's language development (Hamre & Pianta, 2001; Hirsh-Pasek et al., 2009). Language skills appear to be enhanced when children engage in a wide range of age-appropriate activities, such as reading with teachers, pretend play with peers (Sylva et al., 2012), and singing and reciting (Dowling et al., 2020).

One activity that promotes children's language development is show and tell, as it gives children the chance to talk about something from their home life in front of their classmates with the teacher's help, after which the other children can ask questions about it (Mortlock, 2014). Another activity is encouraging children to engage in conversations with the teacher or with their peers. Language and academic skills are higher when teachers encourage children to talk and participate in multi-turn conversations that elaborate on a given topic (Justice et al., 2008; Wasik & Hindman, 2011). As another example, studies have found strong connections between pretend play (roleplay) and language development

because pretend play offers a rich source of language stimulation for children, providing opportunities to develop and practice a range of language skills in a fun and exciting way (e.g., Berk, 2009; Lillard et al., 2013; Weisberg et al., 2013).

The Foundation for Child Development (2020) emphasizes the importance of teachers listening to children rather than talking to them, as research has shown that the amount of time teachers spend listening is a stronger predictor of children's outcomes in both academic and social domains. Additionally, Dickinson and Porche's (2011) longitudinal study found that the ratio of teacher talk to child talk during free play was related to positive outcomes for kindergarteners when there was a higher rate of child talk.

Prior research has likewise found children's language development could be stimulated by teachers using more vocabulary during conversations with children; extended discourse on a single topic (rather than frequent topic switching); and a diversity of language-related activities, including storybook reading, conversations related to children's experiences and interests, and pretend play (e.g., Dickinson & Porche, 2011).

Theories Underpinning Teacher-Child Interaction Quality

The quality of children's interactions is crucial for their development, learning, and well-being (OECD, 2021), and recent studies have emphasized the direct influence of these interactions on development and learning (e.g., Bukhalenkova et al., 2022; Hu et al., 2019). Some of the most basic theories in developmental psychology drive this focus on interaction. Three of the main theories in this regard are ecological systems theory, which focuses on the child's interactions within their immediate environment (Bronfenbrenner, 1986); attachment theory, which focuses on the importance of children's early social exchanges (Bowlby, 1969); and sociocultural theory, with its emphasis on learning through social exchanges by supportive "experts" (Fernyhough, 2008). In keeping with these theories, a key feature of process quality is the responsiveness and warmth of interactions between teacher and children and the extent to which interactions scaffold children's

development and learning (Perlman et al., 2016). I describe these three theories in the following sections, with a focus on the third, as it guided the current study.

Ecological Systems Theory

The first theory underpinning teacher-child interaction quality is Bronfenbrenner's (1986) ecological systems theory, now commonly referred to as the bioecological model of development to recognize the child's influence on and agency within their environment (see Hayes et al., 2017). This model sees a child's development as a complex system of relationships influenced by several levels of the environment, from the child's family and school to general cultural values, laws, and customs:

> Especially in its early phases, but also throughout the life course, human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to as proximal processes. (Bronfenbrenner & Morris, 2006, p. 797)

Therefore, to understand a child's development, it is important to consider their immediate environment and the wider environment. Bronfenbrenner (1986) used five systems—the microsystem (the family, kindergarten, peer group), the mesosystem (processes and connections between systems), the exosystem (how parents' work practices impact family life), the macrosystem (attitudes and ideologies of the system), and the chronosystem (passage of time)—to categorize an individual's environment. Of these, the microsystem has the most influence, encompassing the child's closest environment, including their family and school.

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The ecological systems theory has important implications for education. Regarding teacher-child interactions, it contends that the interactions between the systems have an impact on how well relationships are formed (O'Connor & McCartney, 2007). For instance, a child's home environment can affect how they behave at school, while a teacher's interactions with other teachers and administrators can affect their interactions with children.

In the microsystem, a variety of variables—such as the child's behavior and the classroom environment—can affect the quality of teacher-child interaction (Perlman et al., 2016). Positive interactions with children can be encouraged and their development supported by teachers who create a supportive environment. A child's interaction with peers and overall learning and development can benefit from strong teacher-child interactions. Children who have trustworthy relationships (high-quality interaction) with their teachers are generally more likely than their peers to ask questions, solve problems, try new things, and express their learning (O'Connor & McCartney, 2007).

Sociocultural Theory

Another theory that conceptualizes teacher-child interaction is Vygotsky's sociocultural theory, which I used as a framework in the present study. This theory has been expanded by researchers to include teachers' professional development (Eun, 2008; Shabani, 2016; Shabani et al., 2010). It explains the relationship between social interactions and cognitive development, and many studies in ECEC have adopted it to understand children's development (Hedges & Cullen, 2012; Sanders & Welk, 2005; Veraksa et al., 2016). The main principle of the theory is that children's learning and development occurs in the context of their communities (Nolan & Raban, 2015; Vygotsky, 1979) and that higher-order functions develop through the child's interactions with parents, caregivers, peers, and the culture at large (Vygotsky, 1979). Rogoff (2003) likewise suggested that human learning and development is mostly a social process.

This theory claims that development occurs in several ways: first within the child's individual learning and social development, followed by internalized, ongoing thought in a dialectical manner (Rogoff, 2003; Vygotsky, 1979). According to this model, children can learn concepts without any direct instruction, simply by observation of or participation in experiences with others. Vygotsky connected children's early experiences to education by viewing these interactions as a base they draw on interdependently to develop conceptual knowledge in later formal education. During formal education, children reconceptualize, develop, and build on these everyday experiences to understand scientific, academic, and abstract concepts (Hedges & Cullen, 2012; Vygotsky, 1979). As a result, children's interactions in shared experiences with others play an important role in developing thinking, reasoning, and communication skills (Dombro et al., 2011). Moreover, Vygotsky (2012) asserted that the range of knowledge and skills children could develop through interacting with peers or teachers was greater than what they could develop individually, and Vygotsky (1979) distinguished learning from development:

> Learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and with his peers […] learning is not development; however, properly organized learning results in mental development and sets in motion a variety of developmental processes that would be impossible apart from learning. Thus learning is a necessary and universal aspect of the process of developing culturally organized, specifically human, psychological functions (p. 90)

For a better understanding of sociocultural theory, its main concepts and educational implications are discussed below.

Zone of proximal development (ZPD). Vygotsky (1979) supported his perspective on learning and development by introducing the zone of proximal development (ZPD). The ZPD refers to when children get assistance from others who are more skilled or

knowledgeable to perform a task they could not have perform by themselves (Rogoff et al., 1984). Through this collaboration and complex thinking using cultural tools (e.g., language, signs), children eventually learn to perform the task without assistance. From this perspective, children play an active role in acquiring skills and knowledge. Vygotsky (1979) referred to this role as appropriation of knowledge.

Researchers of culture and cognition who believe in the collaborative nature of cognitive development have been inspired by Vygotsky's ZPD interaction (e.g., Rogoff et al., 1984; Bransford et al., 2000). During this process, children learn to use the intellectual tools of their culture and community, such as language, literacy, and number systems for planning and remembering.

Scaffolding. The term "scaffolding" did not appear in Vygotsky's work, but his beliefs about learning and development provided the theoretical basis for this concept (MacNaughton & Williams, 2008; Vygotsky, 1979). This term was introduced by Wood et al. (1976) and originally meant the external support used when constructing a building. In education, it refers to a type of assistance educators give to students (Carugati & Selleri, 2004). Teachers use scaffolds so that children can accomplish tasks they cannot accomplish independently (Bransford et al., 2000).

The concept of scaffolding explains the ZPD process and answers a common question about the ZPD: "if a child can function at a high level only with assistance, how can this child eventually be able to function at the same level independently?" (Bodrova & Leong, 2001, p. 11). Bringing children to their ZPD requires the appropriate level of assistance to guide learning (Rogoff et al., 1984). Although scaffolding was presented as independent of the ZPD, it is theoretically related to Vygotsky's work on child development. Bruner (1983) described scaffolding as "a process of 'setting up' the situation to make the child's entry easy and successful and then gradually pulling back and handing the role to the child as he becomes skilled enough to manage it" (p. 60).

Scaffolding relates also to the idea that children learn through guided participation (Rogoff, 1990; Rogoff et al., 1984). In this sense, scaffolding is an instructional technique in which a teacher provides individualized support by incrementally improving a learner's ability to build on prior knowledge. Scaffolding can be used in a variety of content areas and across age and grade levels. Within education, the social learning theory of Vygotsky is generally credited with providing a theoretical basis for practice. Scaffolding helps learners move toward understanding and using new concepts, skills, or understandings. Scaffolding involves providing temporary verbal or non-verbal guidance to children moving from one level of learning to another (Vandermaas-Peeler et al., 2002). Scaffolding can support all areas of development (Fair et al., 2005) and helps children during their exploration of new knowledge, meanings, and relationships (MacNaughton & Williams, 2008, p. 93).

In high-quality teacher-child interaction, teachers scaffold children's learning by continuously evaluating the children's ability to determine when they are ready to move from one level of competence to another and can perform a given task without assistance (Fair et al., 2005). This observation and evaluation may require the teacher to join children during their activities, such as roleplaying (Anghileri, 2006). In this framework, teachers need time to give each child guidance that may include descriptions, questions, modelling, instructions, feedback, and hints (Anghileri, 2006; Madsen & Gudmundsdottir, 2000). The time for individual assistance is strongly connected to teacher-student ratio. For preschool children, aged 3 to 5, this ratio ranges from 1:8 to 1:10, depending on group size, and for kindergartens, 5 to 6 years old, the ratio is 1:10 to 1:12 (NAEYC, 2013).

Good scaffolding can be defined by inter-subjectivity, joint problem-solving, warmth and responsiveness, keeping the child in the ZPD, and promoting self-regulation (Berk & Winsler, 1995; Gauvain, 2005). Inter-subjectivity means trying to reach a shared understanding between teacher and child or between children in terms of how each thinks

or feels. This entails finding out what each other think and feel and discussing a common understanding, which must be within the child's ZPD (Gauvian, 2005). Keeping the child in the ZPD is important because a child's learning is maximized when working at the upper level of their competence. This happens when the teacher ensures the children's environment challenges them to go beyond their current unassisted abilities. To do this, teachers could encourage children to learn new skills and concepts using materials in new ways while the teachers stay close by to give appropriate support. Furthermore, when children self-regulate, they can better control their learning. In successful scaffolding, teachers encourage self-regulation by allowing children to work at their own speed, having a quiet area in the classroom, or providing pictures of people's emotions to help children understand different feelings (Shanker, 2013).

In scaffolding, the teacher's role is to support and challenge without frustrating the child by challenging them too much (Vandermaas-Peeler et al., 2002). When implemented properly, scaffolding can be used to achieve numerous teaching goals across diverse domains (e.g., math, reading) and skills, such as cooking, crafts, and technology (MacNaughton & Williams, 2008).

Learning through guided participation. From Vygotsky's point of view, productive teacher-child interactions are oriented toward the ZPD, while other types of instruction are more likely to set back development. As Vygotsky (1979) claimed, "The only good learning is that which is in advance of development" (p. 89). Vygotsky believed development happens when children acquire general concepts and principles that can be applied to achieve tasks or solve problems. Rogoff (1990) refined this perspective with the participation model, which sees development more as the transformation of individual participation in a sociocultural activity. Rogoff stressed that development is transformation—not internalization as Vygotsky believed—meaning development happens through participating in activities. Rogoff also developed the concept of guided

participation by building on the ZPD. Rogoff defined children's cognitive development as "an apprenticeship—it occurs through guided participation in social activity with companions who support and stretch children's understanding of and skill in using the tools of the culture" (p. vii). In contrast to the ZPD, guided participation focuses more on the interrelatedness of children and adult interactions. Those interactions do not have to be face to face (Scott & Palincsar, 2013). For example, a group of children observing and talking about a new plant the teacher brought to class is still a cultural activity "guided" by the teacher. Rogoff (1990) emphasized adding non-verbal cues to broaden the lens of sociocultural theory beyond language-based interactions, which Vygotsky (1979) mentioned as a primary source of learning culture. Rogoff et al. (1984) made the following argument:

> cognitive development is fostered by the arrangements adults make for children's learning environment and by the learner's guided participation in an activity. The adult structures the activity so the overall goal is met by breaking it down into manageable subgoals, helping the child progress toward the goal and complete the subgoals at a level appropriate to the child's skill. (p. 16)

Social guidance by way of these activities is usually tacit, with children not noticing the instruction aspect underpinning the activity, even though the interaction facilitates learning. Teacher guidance sometimes does not even include any direct teacher-child interaction; nevertheless, teachers play an important role in choosing the type of work and play and the settings of their participation in all activities.

Guided participation entails joint responsibility by the teacher and child for organizing and pacing activities and instruction. During learning, the child's participation may change as a result of learning and becoming capable of controlling some components of the target skill or task. Each child plays an active role in their own learning, observes what is going on, is involved in the activity, and may affect the activity (Rogoff, 2003).

Rogoff et al. (1984) believed that "aspects of social guidance of learning are […] responsible, on a day-to-day basis, for the rapid progress of children in becoming socialized participants in the intellectual and social aspects of their society" (p. 17). Furthermore, children in some communities may learn more through observation and listening than from verbalization and action (Rogoff, 2003).

Sociocultural theory's implications for education. The practical implications of sociocultural theory in education mainly revolve around teachers—and peers and other more knowledgeable individuals—scaffolding and transforming learning in response to children's previous learning (Nolan & Raban, 2015). In this way, sociocultural theory has provided an important conceptual lens for educators and researchers to rethink practices in ECEC. As a result, many studies draw heavily on the work of Vygotsky (1979) and more recently Rogoff (1990) (Nolan & Raban, 2015; Sanders & Welk, 2005; Veraksa et al., 2016).

Vygotsky (1979) offered and called for new perspectives to view childhood development and education. He presented several ways children and teachers interact in the ZPD to support children gaining greater competence in daily activities. As noted above, Rogoff (1990) suggested the construct of guided participation as a framework for understanding how children benefit from adult-child interaction in real-world activities. She defined guided participation as a process during which the adult and child determine and carry out the learning activity. Guided participation has five components: (1) selecting the learning activity, (2) determining the goals of the selected activity, (3) establishing connections between what the child already knows and what the teacher wants the child to learn, (4) ensuring that each child achieves independent functioning, and (5) being interactive in a number of dimensions (Seng, 1997).

Vygotsky (1979) viewed the social environment (learning with and from others) as instrumental to a child's learning. However, expectations of what children can do at

different ages vary from culture to culture and community to community. Such

expectations are not universal but interwoven with the child's social and cultural

environment. Rogoff (1990) clarified that in general, "Development involves progress

towards local goals and valued skills" (p. 57).

The sociocultural development perspective has important implications for ECEC.

The key implication is that higher-order functions develop mainly from social interaction.

This theory views teachers as agents of culture within the ECEC setting, which is informed

deeply by cultural knowledge and beliefs. Children are viewed as cultural apprentices who

look for the guidance of others who are more knowledgeable (Nolan & Raban, 2015;

Rogoff, 2003). The ZPD shows how developmental change occurs through support from

more knowledgeable individuals, followed by children's independent achievement (Nolan

& Raban, 2015).

Sociocultural theory can be put into practice in the classroom by understanding and

using the ZPD concept. Teachers may first evaluate children's level of learning, then offer

educational experiences that stretch each child's capability (Sanders & Welk, 2005). In the

beginning, children may need assistance from teachers or more knowledgeable classmates,

but ultimately, their ability will expand. Teachers can promote learning expansion with

several strategies. For example, they could divide children into groups where less

knowledgeable children are paired with children who are more knowledgeable, use direct

instruction, give hints, and employ scaffolding (Sanders & Welk, 2005).

Learning Environment

Environment, including space and materials, greatly affects the quality of interactions in

early childhood (OECD, 2021), and the physical space has a powerful influence on

teachers' interactions with children (AGDE, 2022; Touhill, 2017). A well-resourced

learning environment could keep children more engaged in meaningful and extended

learning, which gives educators the time for supportive interactions rather than simply policing behaviors and enforcing rules (Touhill, 2017).

For these reasons, a central component of ECEC is providing "some aspects of the learning environment (including the concrete learning environment, and the actions of the family and community)" (Siraj-Blatchford et al., 2002, p. 10). High-quality teacher-child interaction requires a high-quality environment, where children feel safe and supported, with access to stimulating and developmentally appropriate resources (AGDE, 2022; Burchinal et al., 2015; Michigan Department of Education, 2021; NAEYC, 2022; OECD, 2021). Children who learn in such environments with high-quality teacher-child interaction have shown long-term improvements on outcomes (Burchinal et al., 2015), including language development, academic performance, and social and emotional skills (Howard et al., 2018; Mashburn et al., 2008).

Studies have suggested that the physical setting is a critical factor in children's learning experiences and interactions (e.g., Burchinal et al., 2015; Soliday Hong et al., 2019; Touhill, 2017), and physical rearrangement of learning areas can increase engagement (Farquhar, 2003).

Physical characteristics of the environment (e.g., the size of the play space) can affect children's cognition, emotion, and behavior (Tonge et al., 2016). One of the most emphasized characteristics of physical environment in ECEC policies is children's safety. The OECD (2021), for example, stated that such "policies have [historically] focused on setting norms to safeguard the safety of young children, such as the formulation of standards on buildings, materials or staff-to-child group ratios" (p. 3). For example, classroom space must be suitable for the number of children. The NAEYC (2018), for instance, recommend having 35 square feet (about 3.25 square meters) for each child in an indoor activity area. However, in Saudi Arabia, the General Administration of Early Childhood Education (2009) stated that since the kindergarten's curriculum is structured

around learning centers, the classroom area should be sufficient for children to practice all the required skills and activities. Each child must be allocated a minimum of 4.5 square meters of space. For example, a classroom area of 50 square meters would be appropriate for accommodating 10 children. Other characteristics include soft furnishings and lighting (Touhill, 2017), air conditioning, a board, and a projector (General Administration of Early Childhood Education, 2009).

Classroom organization is one of the key factors in ECEC interaction. The corner strategy is a classroom organization method that promotes child-centered learning and facilitates active participation and exploration of children's interests in the classroom (Conde-Vélez et al., 2023). Learning corners (or centers, among other names) are "defined areas within a classroom that are prepared with a selection of materials that promote learning in a specific content area, such as art or science" (NAECY, 2022, p. 109). Traditionally, early childhood classrooms have been based around a series of such centers that provide different experiences for children to choose from (Touhill, 2017). Hong et al. (2019) noted that many program standards required that ECEC classrooms be designed to promote children's choice of learning activities through learning centers that promote children's ability to co-construct their learning. Hong et al. (2019) stressed the importance of ensuring and improving the access children have to high-quality, stimulating environments and interactions through these centers. These areas create a stimulating learning environment that is organized in a way that is comfortable, attractive, and varied in terms of activities and material (HighScope, 2019; Michigan Department of Education, 2021; NAEYC, 2018). The learning environment needs to be attractive in a literal sense, i.e., attracting children and encouraging them to be actively involved. Some characteristics of an attractive environment are lots of open-ended materials with a variety of uses (Stonehouse, 2011) that can be used time and time again without becoming boring (Touhill, 2017). Conde-Vélez et al. (2023) demonstrated the positive influence of corners

as an organizational strategy, promoting interactions in different forms, such as group work, and encouraging interrelation in the group.

Environments that provide a range of materials and resources that are accessible directly to children reflect a view of children as active learners and decision makers (Touhill, 2017). According to this view, being able to choose play materials encourages the development of independence and agency and allows children to shape their own learning.

Touhill (2017) recommended creating clear pathways that allow children and teachers to move easily between centers and allocating enough space for each center, considering how many children can participate at a time and how the children will use the center. Also, centers can be divided into noisy (e.g., dramatic play) and quiet (e.g., library) centers that should be far away from each other (General Administration of Early Childhood Education, 2009).

Most recent international standards and studies, such as the OECD (2021), NAEYC (2022), AGDE (2022), and Michigan Department of Education (2021), stress offering a variety of activities and materials to each center that are renewed consistently to expand and enrich learning experiences. In practice, Sandseter et al. (2022) found that offering a variety of materials and activities for child-guided (free) play was highly beneficial for children. In that study, the indoor environment in participating institutions afforded predictable play types in confined spaces designed and furnished for certain kinds of play activities. Additionally, the indoor environment had a significant influence on children's play behavior, with certain environments being more conducive to specific types of play. The authors suggested that teachers need to balance the creation of structured environments that support predictable play with the need for children to have the freedom to bring their own initiatives, ideas, and creativity into their play in unpredictable ways.

Although creating a high-quality learning environment that supports teacher-child interaction is one of the main roles of the teacher, children can build a sense of shared

responsibility by taking on roles and responsibilities in preparing and preserving that environment, such as the responsibilities of maintaining good hygiene, watering plants, and assisting the teacher in preparing materials for activities (Stonehouse, 2011).

Besides the physical environment, teachers in high-quality ECEC create an environment that supports children socially and emotionally (Brock & Curby, 2014; Denham et al., 2012). In the following sections, I address what constitutes a socially and emotionally supportive environment and considerations for the outdoor environment.

Socially and Emotionally Supportive Learning Environments

A high-quality learning environment refers to a safe and nurturing environment that provides developmentally appropriate opportunities for children to learn and grow cognitively, socially, and emotionally; as such, it should be inclusive, culturally responsive, and promote positive teacher-child interactions (AGDE, 2022; Head Start, n.d.).

Verschueren and Koomen (2012) described teacher-child relationships (social and emotional interactions) as having a special significance in kindergarten. In this early stage, children view teachers as a source of security (similar to attachment) during the school day, promoting their learning and development in all aspects. Thus, the professional development in the current study included social and emotional interaction. The researcher assumed that focusing on this dimension was essential to improve ECEC quality in general and teacher-child interaction quality in particular.

A warm, positive ECEC classroom is associated with gains in social skills, whereas the complexity of the language and cognitive stimulation in the classroom environment are related to gains in academic and language skills (Hong et al., 2019; Wang et al., 2020). Teachers assist children's social and emotional development by creating an environment that is emotionally sensitive and supportive, has mutual respect and positive communication, and offers opportunities for autonomy (Brock & Curby, 2014; Denham et

al., 2012). A productive environment that supports high-quality instruction should promote children's understanding of academic concepts through problem-solving, open-ended questions, and real-world experiences and promote language development through discussion, questions, and feedback (Hamre & Pianta, 2005).

Emotionally supportive teacher interactions are kind, warm, and sensitive to children's social and emotional needs and are thoughtful about the best way to respond to children's behaviors and feelings (Pianta et al., 2009). Supportive teachers gently guide children to learning, engage in positive communication, and respect children through respectful language, eye contact, and talking in a calm voice. Studies have shown that warm, communicative interactions increase children's academic performance through increased emotional security, self-confidence, attention to learning, positive attitudes toward learning, and engagement in classroom activities (e.g., Bakken et al., 2017; Spilt et al., 2012).

Each classroom has a complex social network of relationships founded on a history of interactions (Entwisle & Hayduk, 1988). During academic instruction or learning activities, these dynamic relationships are a continuous backdrop influencing all aspects of classroom functioning. Thus, relationships are formed through daily teacher-child interactions, and from these patterns of mutual interactions, teacher and child can begin to predict the other's behavioral responses (Pianta, 1999). This ability functions as a regulatory mechanism changing behaviors based on the range of emotional responses within teacher-child interaction (Pianta, 1999).

Closeness is an important feature that describes the degree to which teacher and child have a warm and supportive relationship (Pianta, 1999). Children who are close to their teachers look to them for comfort when frustrated and explore the learning environment confidently due to the security afforded by this close relationship (Hamre & Pianta, 2007).

Outdoor Learning Environment

According to Tonge et al. (2016), physical environmental factors can influence a child emotionally, cognitively, and behaviorally. The importance of an outdoor environment in particular was recognized by the pioneers of early childhood education, such as Rousseau, Pestalozzi, Froebel, and Dewey, who believed that nature and outdoor activities were essential for children's learning and development (Wolfgang, 2004). Since then, many studies have documented the benefits of this environment on children's development (e.g., Maynard & Waters, 2007; Tonge et al., 2018; Yoong et al., 2022). Outdoor activities provide opportunities for children to develop their creativity and imagination. They also offer more flexibility and variety than indoor settings (Yilmaz, 2016). Studies have shown numerous positive benefits of outdoor play for children's physical health and motor skills (Brussoni et al., 2015), coordination (Tandon et al., 2018), understanding and connection to the natural environment, social interactions, and self-confidence (Alden & Pyle, 2019; Elliott & Chancellor, 2014). Early childhood teachers play a significant role in the quality and type of learning experiences provided to children since their beliefs and values influence their practices (Little et al., 2011). However, few studies have examined teachers' beliefs about the outdoor learning environment (Howe et al., 2021). In those studies that have been conducted, teachers tend to emphasize safety as important in outdoor activities (e.g., Coleman & Dyment, 2013; Erdem, 2018).

Numerous educational organizations have cited certain elements as essential in any outdoor learning environment (e.g., NAEYC, n.d.), and such features have been included in standards for early childhood education programs around the world (e.g., Michigan Department of Education, 2021). According to these authorities, an outdoor learning environment should ideally include adequate space for various types of play (e.g., playing games, exploring nature), stationary equipment (e.g., slides, swings), portable equipment (e.g., bikes, blocks), and materials for content learning.

According to the OECD (2021), activities and resources (including outdoors) are important features of curriculum that enable high-quality interaction. The Australian curriculum, for example, stresses using outdoor space to promote children's appreciation of nature, chances for individual investigation and play-based learning, and discussions and cooperative learning (OECD, 2021). Teachers' role outdoors is similar to their indoor role, including communicating with children at their level, protecting them from harm, providing appropriate activities, encouraging socialization, and managing them gently (NAECY, 2022).

An outdoor environment provides opportunities for dynamic, varied, and open-ended play, which can sometimes be risky. Risky play in this context can be defined as play that provides opportunities for challenge, testing limits, exploring boundaries, and learning about risk of injury (Little & Wyver, 2008), as well as thrilling and exciting forms of play that involve a risk of physical injury (Sandseter, 2009), such as balancing, climbing, and hanging upside down (Tovey, 2010). At the same time, risky play can benefit children's development (Liu & Birkeland, 2022) through rich opportunities for problem-solving, learning, and social skills development (Greenfield, 2004). Brussoni et al. (2015) found that the overall positive health effects of increased risky outdoor play provided a greater benefit than the associated risks.

An example of a risky play approach is AnjiPlay, "a philosophy and approach to early education developed…for the public early childhood programs of Anji County, Zhejiang Province, China" (AnjiPlay Education, n.d.). It is based "on five interconnected principles--love, risk, joy, engagement, and reflection--a fundamental belief in the ability of the child, and a commitment to the right of every child to experience extended periods of self-directed, uninterrupted, and unguided play."

Sandseter and Sando (2016) examined the impact of safety concerns on play in Norwegian early childhood education. Norwegian children have historically enjoyed a

relatively permissive environment when it comes to play. However, recent years have seen

a shift towards a more risk-averse attitude, leading to increasing restrictions or prohibitions

on activities involving rough-and-tumble play, which were previously considered healthy.

This shift was driven in part by external pressures, such as concerns from parents and

society. However, there may be internal factors at play as well, such as concerns from

teachers about legal liability and the potential for accidents.

In a study comparing a Chinese kindergarten with a Norwegian kindergarten, Liu

and Birkeland (2022) interviewed 10 teachers to assess how they viewed risky play in

general, their role in such play, how they ensured student safety, and what prevented risky

play in school. According to the semi-structured interviews, Norwegian teachers showed

more experience (practically and in terms of theory) regarding risky play because of its

historical acceptance in Norway. At the same time, the teachers in China (specifically

Anji) had been expanding their understanding and practice of risky play. Despite having

differing viewpoints and methods, participants in both countries appeared to support risky

play among children.

While the physical and social environment defines the context in which children

learn, the interactions between teachers and children fundamentally shape what that

learning looks like, as explored in the following section.

Pedagogical Interaction in ECEC

Pedagogy is concerned with how teachers in ECEC engage with children to accomplish

developmental goals and what guides the methods teachers use (Anders, 2015). More

specifically, pedagogy refers to the teaching strategies that facilitate learning, offer

children the chance to gain "knowledge, skills, attitudes and dispositions", and may

include student-teacher interaction and the environment where learning takes place (Siraj-

Blatchford et al., 2002, p. 28).

Defined more broadly, pedagogy is everything a teacher does to influence learning in children. All pedagogy definitions have at their core what teachers do and how they do it (Child Australia, n.d.). The following definition of pedagogy was adopted in this study:

> Pedagogy refers to that set of instructional techniques and strategies which enable learning to take place and provide opportunities for the acquisition of knowledge, skills, attitudes and dispositions within a particular social and material context. It refers to the interactive process between teacher and learner and to the learning environment (which includes the concrete learning environment, the family and community). (Siraj-Blatchford et al., 2002, p. 28)

In addition, the study defined pedagogical interactions as "face to face interactions [teachers] engage in with children [that] may take the form of cognitive or social interactions" (Siraj-Blatchford et al., 2002, p. 7). Teacher-child interaction is especially important in ECEC due to the critical development that occurs in early childhood, which is heavily influenced by what and how children are taught (Anders, 2015). Pedagogy is thus related to the "how" of teacher-child interaction. Effective pedagogies produce positive interactions by planning activities in an environment that encourages children's engagement. Such interactions have a consistent, enduring effect on children's development cognitively, linguistically, and socially (Bowman et al., 2001; McNally & Slutsky, 2018). Characteristics of effective pedagogy include consistent relationships and a positive environment that stimulate development in areas such as literacy, numeracy, science, and music (McNally & Slutsky, 2018).

Several international studies have recognized that children's abilities and skills are formed and influenced by the quality of early childhood experiences and interactions at home, in the community, and in ECEC. These experiences in ECEC are defined by process quality, as previously explained, which "refers to the nature of the pedagogical interactions

between ECEC staff and children, as well as interactions between peers, and with their environment" (Wall et al., 2015, p. 4).

A related concept, quality teaching, refers to pedagogical practices that facilitate the learning of diverse children by easing their access to knowledge and activities and enhance skills in building on previous learning (Farquhar, 2003). Quality teaching also includes helping children learn how to learn and providing a strong basis for advancing learning in line with the objectives of the ECEC curriculum and the values of the culture, community, and family.

ECEC pedagogy includes various practices based on principles developed through training and professional experiences and individual understandings. Observable pedagogical practices in ECEC range from direct typical teaching interactions (e.g., simple questioning, reading to the child) to indirect teaching techniques, such as modeling, exploration, questioning, problem-solving, and scaffolding (Stephen, 2010). Pedagogical strategies vary across countries and within the same country across regions and settings (Peterson et al., 2018). Research has shown that quality pedagogy is a key way to improve children's outcomes and that teachers can offer children a strong foundation for ongoing learning and development at all levels (Child Australia, n.d.).

Siraj-Blatchford et al. (2002) showed that effective ECEC pedagogy involved traditional interactions related to direct teaching and the provision of educational environments and routines. Direct teaching included "pedagogical interactions referred to by the Target Child Observations which include simple questioning, description of the activity, didactic instruction, task management, reading to the target child, and organising and allocating tasks" (p. 5). Teachers in effective ECEC services were knowledgeable about the curriculum, understood children's development, shared educational goals with parents, and gave formative feedback to children during activities.

Based on the above, high-quality teacher-child interactions that benefit children are facilitated by three main dimensions: instructional support or pedagogical strategies and techniques (discussed below), managing the learning environment, and social and emotional support (discussed earlier in this chapter). Several studies have shown that teachers focused more on emotional support than instructional support, such as promoting critical thinking and reasoning, offering children feedback, contributing to the acquisition of vocabulary through modeling, and discussion with children (e.g., Barandiaran et al., 2015; Catalina-Patricia et al., 2020). Thus, the present study focused on instructional support more through the pedagogical strategies discussed in the next section to find a balance in teachers' interactions with children. This follows from the call for more studies that consider practice and training for teachers to close the gap between traditional and recommended practices (McLeod et al., 2019).

Pedagogical Strategies in ECEC

Daily interactions in ECEC provide numerous learning opportunities (MacNaughton & Williams, 2008). To maximize these opportunities, an effective teacher chooses a strategy to fit a given situation. Before choosing a strategy, it is important to consider what the children already know, what they can do, and the learning goals. It is important also to remain flexible and observant (NAEYC, n.d., 2022). In pedagogy, strategies are "practices which support learning, for instance, social interactions, assessment, the organization of resources or management" (Siraj-Blatchford et al., 2002, p. 7).

Educators who purposefully use multiple instructional approaches optimize children's opportunities for learning (NAEYC, 2022). These approaches include strategies that range from structured to unstructured and from adult directed to child directed. Children bring to learning environments different backgrounds, interests, experiences, needs, and capacities. When selecting and implementing instructional approaches, educators' consideration of these differences helps all children learn. Instructional

approaches differ in their effectiveness for teaching different elements of curriculum and learning. For a program to address the complexity inherent in any teaching/learning situation, it must use a variety of effective instructional approaches. In classrooms and groups that include teaching assistants or aides and specialized teaching and support staff, the expectation is that these teaching staff members work as a team.

Teachers can use the ZPD to plan activities that include what children are capable of doing and what they can learn to do with assistance (Topçiu & Myftiu, 2015).

Informed by sociocultural theory, mainly the ZPD, I selected five major research-based teaching strategies in ECEC for its initiative: questioning, feedback, discussion, problem-solving, and sustained shared thinking. All of them rely on social interaction and strong relationships between the teacher and child (Siraj-Blatchford et al., 2002). The following sections present each of these strategies.

Questioning. Questioning was one of the main interaction strategies used in this initiative due to its prominence in the literature (e.g., Gourlay et al., 2020; MacNaughton & Williams, 2008). Questions are used to gain or understand new information or compare one's understanding to that of other people (MacNaughton & Williams, 2008). Several studies have discussed how teachers could use children's questions and interests to extend learning (e.g., Baram-Tsabari, 2006; Murray, 2022; Olsson, 2013). Teachers in kindergarten use two main types of questions to gain information from children: open-ended questions and closed-ended questions.

Closed-ended questions usually limit the child's answer to a specific, clear answer, such as finding out if the child knows the names of specific things (e.g., animals, tools, colors, foods) or classroom rules, requiring children to remember what they have learned (Buckleitner, 2007; MacNaughton & Williams, 2008). Therefore, some teachers rely on such questions to check what children know and what they need to be taught. However, children can find these questions boring and might ignore them.

In contrast, open-ended questions promote learning across diverse domains of thinking, encouraging children to explore, imagine, and create instead of merely regurgitating knowledge (Parker & Hurry, 2007). Open-ended questions can make children feel there are no right or wrong answers but rather many possible answers, giving many openings for them to answer and many ways to express knowledge, thinking, feelings, and beliefs. Such questions can be used when teachers want to find out how children are thinking and making sense of the social and natural world. Open-ended questions require the child to share their thoughts, understanding, and feelings with others and enhance problem-solving, science, and mathematical skills (Buckleitner, 2007; MacNaughton & Williams, 2008; Parker & Hurry, 2007).

Asking questions that prompt learning is a skill that takes time to hone (Dengler, 2009; Gourlay et al., 2020; Parker & Hurry, 2007). Effective questioning techniques include only asking one short question at a time and giving children time to think and respond (Dengler, 2009; MacNaughton & Williams, 2008; Parker & Hurry, 2007). Teachers should review their questioning style, whether they have a balance between open- and closed-ended questions, whether their questions encourage learning and take into account developmental stage, and any other strengths and weaknesses (MacNaughton & Williams, 2008; Parker & Hurry, 2007).

As part of their large-scale study, Siraj-Blatchford and Manni (2008) drew on strong quantitative data from the Effective Provision of Pre-School Education (EPPE) study based on 12 kindergartens categorized as more effective for enhancing children's learning. This study provides an extension of analysis concerned with adult questioning carried out in the Researching Effective Pedagogy in the Early Years (REPEY) study. The REPEY study drew on robust quantitative data provided by the Effective Provision of Pre-School Education (EPPE) project to identify the particular pedagogical strategies being applied by more effective pre-school settings to support the development of the skills,

knowledge, and attitudes that enable children to make a good start at school. Siraj-Blatchford and Manni analyzed 5,808 questions across 400 hours of observations of 28 teachers. The aim was to provide a more in-depth analysis of the questioning form applied and explore teachers' use of open-ended questions. They found that 94.5% of all questions asked by ECEC teachers were close-ended, requiring a simple recall of information, expected behavior, choosing between limited choices, or sometimes no response at all. In contrast, only 5.5% were open-ended questions including encouragement or sustained shared thinking, i.e., where teacher and child work together in an intellectual way to solve a problem, clarify a concept, evaluate activities, or extend a narrative.

Siraj-Blatchford and Manni (2008) showed that kindergarten teachers' questioning techniques can reveal strengths and weaknesses of the pedagogical strategies they use, which can be used to improve practices. This result also has implications for the professional development of ECEC teachers. Based on this and other studies, the present study included questioning as one of the pedagogical strategies in its teacher professional development.

Feedback. Feedback is another major interaction strategy that teachers use to promote children's learning and development (MacNaughton & Williams, 2008; Pushparatnam et al., 2021) in such diverse areas as science, mathematics, and literacy (Pushparatnam et al., 2021; Shin et al., 2007). Furthermore, feedback "is the provision of information before, during and after an experience" (MacNaughton & Williams, 2008, p. 93). Feedback can be verbal, such as a comment, or nonverbal, such as a smile expressing appreciation of the child's efforts. Teachers use feedback to promote children's learning in different ways, by giving explicit information about the work they have done, clarifying what they are doing, and evaluating their work. Feedback can be effective when it gives children clear, specific information about their work and helps them think for further learning (Dunlap et al., 2007; MacNaughton & Williams, 2008). Generally, verbal

feedback helps children gain more useful information than nonverbal feedback, since verbal feedback is more explicit (Dunlap et al., 2007; MacNaughton & Williams, 2008). However, feedback should be in whatever form is most appropriate to the child's learning style and abilities.

Verbal feedback should be given in context and explicitly describe events, relationships, interactions, or behaviors. It should describe the child's work rather than judging it and be delivered as soon as possible after the action being commented upon (Dunlap et al., 2007; Pushparatnam et al., 2021). In addition, verbal feedback promotes self-concept development in kindergarten (Penn, 2000). Teachers can use feedback to check if they understand the child's feelings and intentions, which improves children's vocabulary and ability to describe their own mental state and that of others (Harris et al., 2005; MacNaughton & Williams, 2008).

Children's mathematics and reading skills can be supported by feedback, with immediate feedback found to be more effective (Howard et al., 2018; Rimm-Kaufman et al., 2007). Feedback also supports scientific-theory making, especially when teachers use feedback to confirm children's theories and enrich experimentation (McWilliams, 1999).

Children in kindergarten develop the ability to predict whether they are going to succeed at a task. Teachers can support this development through accurate feedback (Shin et al., 2007). Harris et al. (2005) found children trusted those who had provided accurate information in the past and ignored those who provided unreliable information.

Feedback lets children know teachers are interested in their accomplishments and are responsive to their attempts to learn (Shin et al., 2007). Feedback could thus be seen as a simple strategy, but it is important for teachers to track their feedback style as well as their strengths and weaknesses in applying this strategy intentionally to improve their competence as a teacher (Howard et al., 2018; Shin et al., 2007).

In the ECEC classroom, teachers engage in feedback loops that involve back and forth exchanges with children or an individual child until they understand a target concept. In a high-quality classroom, this involves the teachers' use of scaffolding and follow-up questions that lead to clarifying misunderstandings and misconceptions. This kind of positive, targeted verbal feedback is associated with higher outcomes (Howard et al., 2018).

Discussion. Discussion is one of the main interaction strategies in ECEC (NAEYC, 2022). Good discussion involves meaningful questions and positive feedback (Kook, 2023). Howard et al. (2018) stated that in a high-quality early childhood classroom, teachers engage in discussions that involve positive, targeted verbal feedback and clarify misunderstandings. Class discussions can teach children respect for others, improve communication skills, and show how to interact with peers and adults, goals set by the Illinois Early Learning Project (n.d.). According to Sylvia (2009), group discussion could produce a high level of cognitive conflict, thus stimulating children's positive thinking and producing a high level of thinking interaction. Having discussions after a book or story, for instance, that a teacher leads with a group of preschoolers can provide opportunities to develop children's thinking capacity (Kook, 2023).

The curriculum and learning environment should create opportunities for children to have discussions with educators or with each other (NAEYC, 2022). For instance, these can be discussions about solving interpersonal problems or solving problems related to the physical world (e.g., how to retrieve a ball that has gone over a fence, using ramps to make cars go faster or further, putting puzzles together). This aligns with a focus on activities that involve discussion and reflection (OECD, 2012, 2014).

Such an approach has been adopted in various countries. Denmark's ECEC system, for example, emphasizes the importance of dialogue between adults and children, as well as creative activities with discussions and reflections (OECD, 2012; OECD, 2014b).

Questioning, feedback, and discussion are closely related strategies. For example, Kook (2023) mentioned that an activity can have higher-level questions, but if these questions are asked in isolation, with minimal feedback provided after children's responses, there could be little depth of understanding achieved. Without the scaffolding of follow-up questions and discussion, even a very good question may fail to make any appreciable impression on a child.

Problem-solving. Problem-solving is a foundational skill in all walks of life. In education, it involves helping students learn how to find answers to questions and problems in their daily world (MacNaughton & Williams, 2008). As a cognitive skill, it supports the development of learning in areas such as literacy, technology, mathematics, and science, and a growing body of research is based on the role problem-solving can have in building young children's social competence and prosocial behaviors (Gross, 2005). This form of interpersonal and social problem-solving is used more widely with children who struggle to build peaceable relationships with peers, and it is important for teachers to remember that social as well as academic learning can grow through learning how to resolve problems (MacNaughton & Williams, 2008).

Problem-solving is closely related to questioning, feedback, and discussion. Through questions, discussion, and feedback, teachers can walk children through a thought process, providing hints on how to solve a problem, asking children to recall what they know to connect relevant information in their minds, and breaking the problem down into smaller steps (Kook, 2023; MacNaughton & Williams, 2008). For this reason, problem-solving is one of the main interaction strategies in early childhood education (OECD, 2012).

Teachers can facilitate problem-solving by valuing children's problems and solutions. Children need to feel it is alright if they have a problem or come up with the wrong solution (Britz, 1993). Children's judgements and solutions should never be

ridiculed; instead, they should be valued like those of adults, and when wrong, they should know they will not be punished. Teachers should focus on children's answers and encourage them to try or share their own solutions to create positive reinforcement (Poole et al., 2004; Recep, 2018). In addition, teachers can promote a better climate for problem-solving by encouraging children to listen and understand other perspectives, identify problems, and find different solutions (Browning et al., 2000; NAEYC, 2022).

Some of the teacher's roles in this area include giving children opportunities to solve problems, giving them clues, and acknowledging their feelings (Kook, 2023; MacNaughton & Williams, 2008). Children should be allowed to take their time when thinking about how to solve a problem and test their solutions in practice, with trial and error an important part of learning (Poole et al., 2004; Recep, 2018). Therefore, teachers should allocate enough time for children to examine a problem and give them opportunities to practice their problem-solving skills (Browning et al., 2000). Everyday situations can provide material to practice problem-solving in the classroom; teachers simply need to present a problem to children, ask for suggestions and solutions, and discuss each solution with them (Mesrobian, 2021). The best physical materials to encourage problem-solving are flexible and open-ended, such as water, sand, blocks, and art materials, as they create more opportunities to solve the problem (Poole et al., 2004). With these tools, children can explore and test out solutions more freely.

Given the chance to collaborate with peers and adults on problem-solving, children can show deeper thinking (Touhill, 2012a). Adults can facilitate this more complex thinking by engaging collaboratively with children as they learn. This involves "helping to extend, support and guide children's thinking rather than simply providing immediate answers to children's questions" (p. 5).

Sustained shared thinking. The term "sustained shared thinking" originated in research considering components of excellent ECEC practices in England, specifically

from the REPEY study (Sylva et al., 2012). In early years education, sustained shared thinking is when individuals (i.e., children and their peers or teachers) exchange ideas and share thoughts in a mutually respectful and collaborative way (Fisher, 2006; Siraj-Blatchford et al., 2002; Touhill, 2012a). This process requires encouraging feedback, open-ended questions, discussion, problem-solving, and intentionally seeking to understand the other's thoughts, thereby promoting the development of language, social, and critical thinking skills (Touhill, 2012a).

Sustained shared thinking occurs when "two or more individuals 'work together' in an intellectual way to solve a problem, clarify a concept, evaluate activities, extend a narrative etc. Both parties must contribute to the thinking and it must develop and extend" (Siraj-Blatchford et al., 2002, p. 8). This means the teacher and child have to contribute to thinking, which develops and extends their understanding. Highly qualified teachers use such interactions more than less qualified teachers as initiating and maintaining child-led interaction depends on the teacher's skills and abilities (Siraj-Blatchford et al., 2002). Therefore, teachers should experience this type of interaction as part of comprehensive professional development.

A study in New Zealand concluded that in high-quality interactions, teachers were truly interested in what children were doing, were paying close attention, and were helping extend their thinking and knowledge (Dunkin & Hanna, 2001). Wall et al. (2015) found that in ECEC settings where sustained shared thinking was common, children showed better developmental progress. Another key practice to enable sustained shared thinking is play-based learning. During play, the teacher helps children by giving feedback on their learning through scaffolding.

Touhill (2012a) compared dialogue to tossing a ball from one speaker to another, with a richer dialogue metaphorically seen as keeping the ball in the air longer, such as through open-ended questions. However, Touhill observed that adults often have only

"superficial" verbal interactions with a child, such as giving orders or greetings. Limiting adult-child interactions in that way creates few avenues to engage more deeply with how children think and learn.

Waibel (2021) recommend that teachers and children collaborate as "equal partners" to "generate and expand a thinking process together" (p. 60), noting that play offered an opportunity for both teacher and child to be involved in sustained shared thinking. Sustained shared thinking can also be implemented by asking open-ended questions after a story and giving children time to consider, draw, discuss their ideas, and choose interesting activities that capture their attention (Brodle, 2014; Touhill, 2012a; Waibel, 2021).

Melhuish et al. (2016) found that evidence-based professional development focused on promoting sustained shared thinking through quality interactions could improve ECEC and children's outcomes. Therefore, there is a need to develop teachers' capacity for fostering interactions that contain sustained shared thinking through professional development. The REPEY study (Sylva et al., 2012) mentioned pedagogical framing to set the scene for sustained shared thinking to happen, highlighting the need for proper planning, as discussed below.

Planning activities based on children's interests. Children learn best when they are interested and engaged (Touhill, 2012b). Planning activities based on children's interests promotes children's engagement, motivation, and positive attitudes toward learning by creating an environment responsive to their needs and interests (AGDE, 2022; Copple & Bredekamp, 2009; NAEYC, 2020). This can promote a sense of belonging and engagement among children, which is essential for their overall development and well-being (NAEYC, 2020). When kindergarten teachers plan and record learning experiences based on children's interests, strengths, and needs, this emergent curriculum approach

benefits children, teachers, parents, and partners by fostering interaction and collaboration (Queensland Curriculum & Assessment Authority, 2014).

This type of approach has been applied successfully in a variety of cultures and contexts. For example, the OECD (2021) noted that the curriculum in countries such as Japan and Canada emphasized children's interests and questions. Furthermore, addressing children's questions has been shown to extend their learning (Baram-Tsabari, 2006; Murray, 2022; Olsson, 2013).

Birbili (2019) recommended valuing and incorporating children's interests in early years education and provided guidance for teachers on how to do so effectively. Birbili also mentioned challenges, such as time constraints, curriculum requirements, and differing interests among children. Similarly, Lewis et al. (2019) found it was challenging to teach intentionally in a child-centered program based on children's interests.

While considering children's interests is important, not everything teachers do must be based on their interests because children are only interested in what they already know about. If teachers focus only on what children are already interested in, they will have limited ideas and interests to draw on (Touhill, 2012b). A balanced approach to planning enables teachers to incorporate children's ideas and interests with their own teacher-led focus for learning activities (Queensland Curriculum & Assessment Authority, 2014).

Encouraging children to complete their work (persistence). Encouraging children to complete their work and fostering persistence helps them develop a sense of accomplishment and self-esteem, which can improve their overall well-being, confidence, and resilience in the face of future challenges (Leonard & Garcia, 2020). McClelland et al. (2011) highlighted the importance of self-regulation skills, including persistence and attention, for academic achievement in early childhood education; children who are able to regulate their behavior and persist through challenges are better able to engage with

academic material and achieve success in school. Similar statements have been echoed by other studies (e.g., Duckworth & Seligman, 2005; Eskreis-Winkler et al., 2014).

Dweck (2010) offered various strategies for encouraging children to complete their work, such as providing clear instructions, breaking down tasks into manageable steps, providing positive feedback, and setting achievable goals. Teachers can also model perseverance and persistence themselves by demonstrating a positive attitude towards challenges and setbacks and by providing opportunities for children to practice these skills in a supportive environment. In line with that assessment, Leonard et al. (2020) found in a study of preschool children "that children can learn the value of effort from adult models" (p. 32). Interaction strategies supported by the literature, such as feedback, questions, and modeling (e.g., Hamre, 2014; Mashburn et al., 2008), can encourage perseverance and persistence as well. Another way to encourage persistence is to praise children for the effort they put forth instead of focusing only on their accomplishments (Mueller & Dweck, 1998). The above strategies are especially powerful when applied early on in a child's life (Mokrova et al., 2013).

Teaching Approaches in High-Quality ECEC

Play-based learning is a cornerstone of ECEC around the world (Edwards, 2017). Although the definition of play is debated in the literature, it is widely agreed that play offers both a context and process for learning and teaching (DeLuca et al., 2020). Children can experiment with materials, express new understandings, and explore ideas through play (Edwards, 2017). Increasingly, the notion of quality in play-based pedagogy encourages teachers to integrate traditional beliefs about play with new insights into the role of social interactions, modeling, and relationships in children's learning. Internationally, the trend toward high-quality play-based pedagogy reflects discussions and initiatives related to the idea of intentional teaching. Intentional teaching arguably engages educators and children in shared thinking and problem-solving to build the learning outcomes of young children.

However, the pedagogical relationship between play-based learning and intentional teaching remains difficult to conceptualize, as explored below.

Play-Based Learning

As mentioned in Chapter 1, the Saudi self-learning curriculum is a play-based curriculum employed in learning corners and outdoor play time (Ministry of Education, 2005) and is referred to in the international literature as play-based learning (e.g., Edwards, 2017; Pyle & Danniels, 2017). Play-based learning is a teaching approach that involves playful, child-directed elements along with some degree of adult guidance and scaffolded learning objectives (Weisberg et al., 2013). Play-based learning is a somewhat broad term that can be broken down into subtypes, which fall along a continuum based on how much agency children have and what role their teachers play (Pyle & Danniels, 2017). On one end of the spectrum, when children have greater agency and are the main ones directing activities, this is referred to as free play. On the other end, when teachers are the ones mainly directing activities, this is called learning through play. Teacher-guided play occupies the middle of the continuum, where both teacher and child share in directing activities. This continuum is illustrated in Figure 2.1.

Figure 2.1: Continuum of Play-Based Learning (Adapted from Pyle & Danniels, 2017)
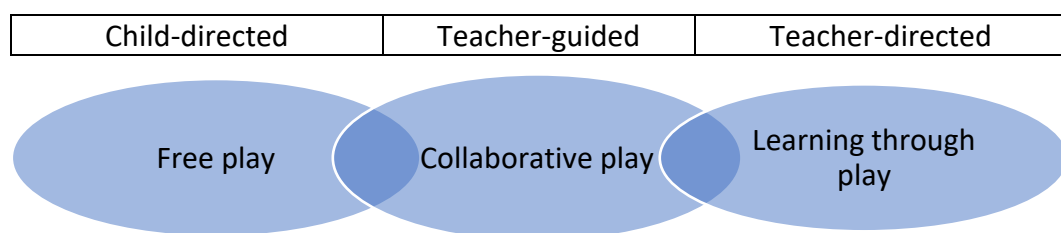
Although studies have shown the benefits of child-directed pretend play on socioemotional development (e.g., Ashiabi, 2007; Berk & Meyers, 2013; Bodrova et al., 2013), teacher-directed play is more beneficial for developing children's academic skills (Tsao, 2008). In one study, Goble and Pianta (2017) found differing benefits of free time and teacher-directed activities in preschool. Free time predicted higher inhibitory control,

while teacher-directed time showed higher development of literary and language ability. On the other hand, when effective teacher-child interaction was observed during free time, this predicted higher literary and language ability as well.

Research has shown that children benefit in different ways from all forms of play across the continuum, but guided play leads to the most significant learning and developmental outcomes (Pyle & Danniels, 2017). For example, combining play and literacy in kindergarten has been associated with students being more interested in learning about and practicing their literacy skills, while teachers can boost that interest as well by being more involved in those activities (Tsao, 2008).

Free-play is a pedagogical approach in which children freely choose play activities (Pyle & Danniels, 2017). This has also been referred to as "pure play" by Wood (2010), while Bakar et al. (2015) framed it as child-initiated activities, when children freely choose the activities, the teacher is the co-player, but the children largely do the negotiation and set their own goals. In other words, the children in such a setting exercise choice, imagination, and control. In their study, Pyle and Danniels (2017) found free play was the dominant type of play. In 15 classes observed, 60% were free play; children directed their play narratives and chose the resources they wanted to use. There was little to no teacher interaction in the structure of the children's play.

Teachers could introduce more collaborative or teacher-guided activities that either the teacher or child can initiate, although the child would still have a more central role (Weisberg et al., 2013). Under this framework, children direct their learning through activities that incorporate well-planned material; teachers enrich this experience by commenting on, playing along in, asking questions about, or demonstrating activities (Fisher et al., 2013; Tsao, 2008).

Some have presented play as an activity that teachers should not interfere with, in which the teacher's responsibility is "to support, not to disturb" (Pramling Samuelsson &

Johansson, 2006, p. 48) and to avoid contriving or "hijacking" the play (Goouch, 2008, p. 95). However, an effective program combines both child-guided and teacher-guided educational experiences (Epstein, 2007). According to Epstein (2007), "child-guided" and "adult-guided" here are not opposite ends of a spectrum in that an adult-guided experience does not mean an adult controls everything. Instead, children can play active parts in the context of an adult-guided experience, while an adult can take intentional actions within a child-guided experience, and each type of experience can employ planned and unplanned opportunities to grow and learn. Resources cannot replace sensitive and engaged educators. As with the other elements of a well-designed environment, resources can support what teachers are able to do (Touhill, 2017). When analyzed in the context of interacting to enhance children's learning and development, focusing on learning resources might not be successful; the teacher's ideal role is to engage children in deep learning (Hoang et al., 2018).

Play offers an opportunity for children to explore and understand academic concepts, in which teacher involvement is a chance to expand and encourage learning (Pyle & Bigelow, 2014; Weisberg et al., 2013). Play-based learning, specifically guided play, preserves unstructured play while allowing children to relate to material in a real way. Children co-construct learning with teachers and peers, making meaningful discoveries and working towards learning goals. Guided play is pleasurable, self-selected, process-focused, child-directed, and teacher-facilitated, with teachers actively participating as planners, observers, and guides (Weisberg et al., 2013).

Play-Based Learning and Intentionality

Intentional teaching means teachers interact with children with specific goals in mind, requiring wide-ranging knowledge about children's learning and development (Epstein, 2007). This process involves the combination of child-guided and teacher-guided educational experiences and understanding how teachers interact with children. Intentional

teaching considers the role of adult engagement in children's play. Being an intentional teacher is a continuous process that starts when teachers give serious consideration to how they assist children's learning and consider the impact they have on children's lives (Barnes, 2012). It includes "modelling and demonstrating, open questioning, speculating, explaining, engaging in shared thinking and problem solving to extend children's thinking and learning" (DEEWR, 2009, p. 5).

The Early Years Learning Framework first promoted intentional teaching as a core recommended practice in 2009 (DEEWR, 2009). This framework was changed in 2022, replacing intentional teaching with the more general conception of intentionality, including students as well as teachers' intentional actions, and combining that concept with learning through play under the umbrella practice of "play-based learning and intentionality" (AGDE, 2022). Play-based learning in this framework should involve teachers working with intentionality in their teaching practices while still giving children a degree of agency and freedom (Leggett, 2023). Thus, this framework recognizes that teachers as well as young children can act intentionally in the learning process (AGDE, 2022).

The practice of teaching to support children's learning has often been seen as conflicting with the nature of play-based learning (McArdle & McWilliams, 2005; Siraj-Blatchford, 2009; Thomas et al., 2011). The dominant view in ECEC has been to see play as the primary context for learning (Bruce, 2001; Wood, 2009). However, recent curriculum documents have focused on synergizing these seeming opposites (DEEWR, 2009; Grieshaber, 2008; Queensland Studies Authority, 2010; Siraj-Blatchford, 2009). For instance, through observations of and interviews with two teachers, Thomas et al. (2011) found that intentional teaching and play-based learning each had a positive impact and appeared to be important components of learning.

Despite some progress, it remains unclear how intentional teaching is related to play-based learning. The reason for this uncertainty is that intentional teaching seeks to

help children acquire knowledge, which could appear to conflict with the more spontaneous exploration associated with play-based learning (Edwards, 2017). Furthermore, balancing play-based learning with regular teaching can be difficult, especially when there is pressure from above for teachers to improve children's outcomes while still adhering to child-led practices (Grieshaber et al., 2021; Hedges & Cooper, 2018). With that in mind, various factors affecting the quality of teacher-child interaction are explored below.

Factors Affecting Teacher-Child Interaction Quality

There are several factors that affect teacher-child interaction quality. One example would be ECEC teachers' educational specialization and degree; according to the NAEYC's (2022) statement, "Ideally teachers can have a minimum of a higher education degree (bachelor's degree or associate degree) with a major in early childhood education, child development, elementary education, or early childhood special education" (p. 64). Another example is the learning environment (AGDE, 2022). A high-quality learning environment positively affects teacher-child interaction quality (OECD, 2021), while a poor environment can constrain it (Touhill, 2017), as discussed in the section on the learning environment. My study addresses the factors affecting teacher-child interaction quality which are discussed below: professional development, working conditions, communication and cooperation with parents, teacher-child ratio, and supportive and cooperative administration.

Professional Development

The importance of ongoing professional development in making sure that teachers stay up-to-date with evidence-based practices (e.g., conferences, workshops, coaching, mentoring) has been noted in several studies (e.g., Early, 2017; Egert, 2020; OECD, 2018). Thus, significant public investment in professional development for early childhood teachers is being made all over the world to improve ECEC quality and children's development

(Oberhuemer, 2013; OECD, 2012). Moreover, the OECD (2020a) noted that professional development could lead to better health, education, and social outcomes for children. Furthermore, several studies have found that professional development could improve teacher-child interaction quality in early childhood education (e.g., Early, 2017; Early et al., 2017), as discussed in more detail later in this chapter in the section on professional development and teacher-child interaction quality.

Working Conditions

Working conditions can have a profound impact on teachers' job satisfaction; capacity to carry out their tasks; and potential to positively interact with children, give them enough attention, and foster their development (OECD, 2011). Studies have shown that teacher-child interaction quality is influenced not only by the teachers' level of education and professional development but also by external factors, such as their work environment, salary, and work benefits (Markowitz & Seyarto, 2023). Compensation is one important factor in facilitating good working conditions, with financial and non-financial incentives an effective way to increase job satisfaction and encourage well-trained teachers (OECD, 2011).

The OECD (2020a) noted how several challenges faced by teachers, such as a lack of support and professional development, can lead to high levels of stress and burnout. Work environments can thus have a significant impact on the quality of childcare. A positive and stimulating work environment is therefore essential for early childhood teachers to provide high-quality care (Cumming et al., 2021). For this reason, the NAEYC (2022) tied one standard of quality to the policies and procedures that support teachers' well-being, empowerment, and overall quality of work life. A report from the OECD (2020a) recommended providing early childhood teachers with adequate resources and support for professional development. By doing so, countries can help ensure high-quality early education and care for young children and improve outcomes for their development

later in life. Based on the above literature, schools should seek to improve the working conditions of teachers to facilitate better teacher-child interaction.

Communication and Cooperation with Parents

Cooperation and communication with parents is critical for multiple reasons. Involving parents in their child's early learning and development can lead to more positive outcomes for children (Halgunseth, 2009; LaRocque et al., 2011). It can help build a supportive and cooperative learning environment and help teachers gain valuable insights into a child's background and experiences, allowing them to tailor their teaching strategies to better match the child's needs and strengths. Establishing strong relationships with families and involving them in the education process is thus a key component of high-quality early childhood programs (AGDE, 2022; Halgunseth, 2009; NAECY, 2022). For this reason, the NAEYC (2022) recommended cultivating and maintaining positive relationships between teachers and families, stressing the need for ongoing communication. Communicating effectively with parents to know each child's background, circumstances, and capabilities can help teachers interact with children more easily and effectively (Hilado et al., 2013). The NAEYC (2022) recommended that programs provide regular opportunities for parent-teacher communication, involve parents in program decision-making, and create a welcoming and supportive environment for families.

According to Finnish teachers in Chappell and Szente (2019), communicating with families about their child's main goals and plans for learning was a sign of ECEC quality. Teachers stated that they valued the parents' input about their children's needs, but some mentioned that parents were sometimes not interested or too busy to learn about their children's day-to-day learning activities and goals. Finally, family engagement and support are important for the continued development of ECEC programs (Al Shanawani, 2023). With the above literature in mind, actively communicating and working with parents could contribute to better teacher-child interactions.

Teacher-Child Ratio

A developmentally appropriate teacher-child ratio in the classroom enables teachers to focus on the individual needs of the children and engage them in meaningful interactions (OECD, 2011). Studies have shown that lower class sizes and smaller teacher-child ratios improve child outcomes, reduce behavioral problems among children, lower teacher stress, improve the teacher's experience, and lower rates of special education (e.g., Ackerman & Barnett, 2006; Pianta et al., 2005; Schachner et al., 2016). On the other hand, a lower ratio does not automatically translate into higher-quality learning, as teachers need to adapt their pedagogy to take advantage of the lower ratio.

International standards such as the NAEYC (2022) and studies such as Hong et al. (2019) and Maier et al. (2020) have recommended various ideal ratios. For example, the NAEYC (2021) has recommended a teacher-child ratio of 1:12 as developmentally appropriate in kindergarten classrooms and indoor settings. The National Institute for Early Education Research, on the other hand, recommended a teacher-child ratio of 1:10 or less in preschool with a maximum class size of 20 (Friedman-Krauss et al., 2022). According to the OECD (2020b), in Saudi Arabia, the teacher-child ratio in preschool (KG1-KG3) increased by five children between 2013 and 2018 but the ratio in 2018 remained comparable to the OECD average (1:12).

The recommendations above suggest that smaller classes and fewer children per teacher should allow teachers to offer each child more individualized attention, work with smaller groups, and interact with each child more frequently, resulting in better outcomes (Friedman-Krauss et al., 2022). A staff-child ratio of 1:10 is lower than in programs found to have the largest persistent effects, but it is generally accepted by professional opinion. One meta-analysis suggested an even lower threshold, below 1:7.5 with a maximum class size of 15, would be better, a finding consistent with experimental evidence from kindergartens (Bowne et al., 2017). However, one program produced large short-term

gains with a maximum class size of 22 and a 1:11 teacher-child ratio, just outside the benchmarks (Weiland et al., 2013).

Hong et al. (2019) stated that larger child-adult ratios were negatively related to social skills in four basic areas (language, pre-literacy, social skills, and math). Certain indicators were related to improvements in some areas but not others. These indicators included the educational background of the teachers and administrator, the curriculum employed, interactions between the children, and teacher quality. Other indicators, including group size and global quality, did not show such a relationship. Based on these findings, Hong et al. recommended higher levels of training and preparation requirements for teachers to manage slightly larger group sizes and high teacher-child ratios.

Teachers have identified ECEC supervision policies and high teacher-child ratios as limiting their ability to better engage children in physical activity outdoors (Coleman & Dyment, 2013; Temple & O'Connor, 2004). For instance, one teacher mentioned that a 1:7 ratio would be better (Temple & O'Connor, 2004). Based on the literature, ECEC administrators should seek to reduce the teacher-child ratio as one way to facilitate more meaningful interaction between teachers and children.

Administration Requirements

Since a kindergarten's policies establish the climate of an ECEC organization, choose the curriculum, and shape supervising choices, these policies and those who create and enforce them represent major determinants of ECEC quality (Hong, 2019). Public kindergarten administrators in Saudi Arabia typically include a principal, vice-principal, and administrative staff (Ministry of Education, 2021). Competent and supportive administration can improve ECEC quality by creating an environment that promotes productivity and supports ongoing professional development (OECD, 2011). Although part of working conditions is related to regulation (Ministry of Education, 2021), another part is kindergarten-specific and varies from one kindergarten to another (OECD, 2011).

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Supportive ECEC organizations that provide better working conditions and ongoing professional development tend to provide better education and care for children (Diamond & Powell, 2011). In contrast, ECEC teachers who experience little professional support from administration have lower job satisfaction and perform their teaching and caregiving tasks less competently than teachers who are professionally supported; in this context, professional support usually means that the administration supports, stimulates, and subsidizes professional development (Ackerman, 2006).

In addition to good working conditions, as discussed previously, providing non-financial support and incentives for teachers is also likely to improve their well-being and encourage ongoing professional development (OECD, 2011). The flexibility of an ECEC administration's requirements can also promote teacher-child interaction quality, especially in terms of planning activities and daily schedule (Gadikowski, 2013). However, administrations vary in how much power they give teachers to make activities, deviate from the curriculum, or change the daily schedule (OECD, 2021). The NAEYC (2022) asserted that the daily schedule should be predictable yet responsive to individual needs. Giving teachers the ability to plan activities based on children's interests is another facilitator of high-quality teacher interaction that cannot happen effectively if the administration fails to empower teachers and give them some freedom and flexibility (Biermeier, 2015). This is explored in the section "Planning Activities Based on Children's Interests."

Teacher-Child Interaction Quality and Professional Development

Among all the factors that influence the success of ECEC programs, the most important is the quality of the teaching workforce. The design and delivery of effective approaches to professional development are central to the support of ECEC teachers (Hamre, 2017). Despite the growing demands for professional development that helps teachers support children's development and learning, research on ECEC professional development remains

underdeveloped, with little determined about what would constitute the most effective models to follow (Han, 2012). As shown by Zaslow et al.'s (2010a, 2010b) literature review, most ECEC professional development has focused on developing children's academic skills, mainly literacy, even though many studies have demonstrated the importance of teacher-child interaction (e.g., Downer et al., 2010a; Early et al., 2017; Hamre, 2014; Hamre & Pianta, 2007; McNally & Slutsky, 2018; Melhuish et al., 2015; Siraj-Blatchford & Sylva, 2004; Wylie et al., 2006). In addition, no Saudi studies have focused on improving teacher-child interaction quality through a professional development model. In fact, professional development for Saudi teachers in general, and ECEC teachers in particular, is very limited and relies heavily on workshops that last for only one or two days. To address this gap, I designed a professional development initiative to improve teacher-child interaction quality in a public Saudi kindergarten.

The subsections below review the literature that informed the design of this initiative. They define professional development, discuss its role in improving teacher-child interaction quality, examine professional development from a sociocultural perspective, explain the key characteristics of effective professional development, illustrate relevant models, and describe the current study's design.

Defining Professional Development

Effective teaching can be learned over time through practice and professional development (DeMonte, 2013). Professional development in this context can be defined as an opportunity for teachers to "review, renew and extend" their knowledge about teaching and to gain and expand new knowledge and skills (Day, 1999, p. 4). Professional development is a career-long need as teaching practices continually evolve (Musset, 2010). Snyder et al. (2012) viewed professional development as a way to facilitate teaching and learning by enhancing teachers' skills, knowledge, capacity, and disposition to provide children with high-quality learning experiences.

Teacher education progresses along a continuum, consisting of "the formal and informal educational and developmental activities in which teachers engage, as life-long learners, during their teaching career. It encompasses initial teacher education, induction, early and continuing professional development and, indeed, late career support" (Teaching Council of Ireland, 2011, p. 5). However, teachers, policymakers, and teacher educators often do not consider these three stages as a continuum, and there are frequently missing links between stages (Musset, 2010). This incomplete view reduces professional development's effectiveness. For teachers to continuously perform at their best, it is important for these stages to be perceived as forming a continuum within the teaching community.

Role of Professional Development in Improving Teacher-Child Interaction Quality

A growing body of research has shown the critical role of the educator and professional development in improving ECEC quality (e.g., Cordingley et al., 2015; Egert et al., 2018; Jensen & Iannone, 2018; Markowitz & Seyarto, 2023; Zaslow et al., 2010a). Teachers are tasked with providing the responsive and sensitive interactions children need for positive development (Hamre, 2014). The preparation of teachers, however, varies considerably, with many not having enough training to engage in high-quality interactions (Phillips et al., 2016). This has resulted in inconsistent quality in ECEC; in the U.S., for example, while teachers' interactions are often high in emotional support, the quality of their interactions in instructional support and scaffolding remains low on average (Bassok et al., 2016). This is because ECEC teachers have a wide variety of qualifications, and best practices are rapidly changing in the field (Siraj et al., 2019). Initial preparation alone does not ensure new teachers have the skills and knowledge to improve children's outcomes and development socially, emotionally, and cognitively (Egert et al., 2018; Pianta et al., 2009; Siraj & Kingston, 2015). When professional development is well designed and delivered, it can fill gaps in teachers' knowledge and skills from their initial education and keep them

up to date with research on best practices (Egert et al., 2018; Markussen-Brown et al., 2017; Schachter, 2015). However, the effectiveness of professional development has not been widely evaluated in the domain of ECEC (Egert et al., 2018). Thus, while there is general agreement among studies that professional development has the potential to enhance teaching practices, its actual effectiveness at improving learner outcomes is uncertain (OECD, 2012).

Effective teachers engage with children in high-quality purposeful interactions, have adequate knowledge of the curriculum, know how children learn and develop, provide individual care and instruction, and are responsive and reflective (Egert et al., 2018; Siraj et al., 2019). Nevertheless, there is relatively little evidence showing how ECEC environments and pedagogy can be enhanced to produce adequate developmental outcomes (Zaslow et al., 2010a, 2010b). Furthermore, professional development studies have been inconsistent on which approaches are most effective—such as coaching or group-based learning, online or face-to-face training, and continuous programs or one-off delivery—and how they are related to different types of outcomes, such as teacher-child relationships and self-regulation (Egert et al., 2018; Schachter, 2015). Professional development that helps teachers learn high-quality interaction strategies has been shown to be particularly successful (Brunsek et al., 2020).

Siraj et al. (2023) evaluated an evidence-based in-service professional development program, Leadership for Learning. The program was developed with close reference to two recognized quality rating scales: the Early Childhood Environmental Rating Scale–Extension (ECERS-E) and the Sustained Shared Thinking and Emotional Wellbeing (SSTEW). They used a cluster-randomized controlled trial with 83 ECEC centers and 1,346 children in kindergarten. The results showed significant improvements in teaching quality (interaction and instruction) and in language, numeracy, and social-emotional child development.

Most of the studies that have examined the impact of professional development programs on teacher-child interaction quality have intentionally been aligned with observational measures of teacher-child interaction quality (e.g., CLASS, ECERS-E, and SSTEW). Furthermore, there is a lack of research on teacher-child interaction quality and teacher professional development in the Saudi context. The validity and reliability of CLASS and SSTEW have not been established in the Saudi context. While ECERS-E has been tested and modified for Saudi Arabia by Gahwaji (2006), i.e., in the form of ECERS-SA, this remains a general measure of ECEC quality with only one section on teacher-child interaction quality. In contrast, I sought to focus on teachers' perspectives. As a result, I designed a unique initiative based on the literature.

Characteristics of Effective Professional Development

A single perfect model for teacher professional development does not exist (Smith, 2012). Therefore, rather than being limited to choosing an existing model, effective professional development characteristics should be used to design a unique model that fits teachers' needs and sociocultural context (Guskey, 2003; Kennedy, 2014; Smith, 2012). The characteristics that have been shown to greatly enhance the quality and success of professional development are outlined below.

First and foremost, professional development should be embedded in the job (Guskey, 2003; Kennedy, 2014; Smith, 2012). According to the National Council on Teacher Quality (2012), professional development is job-embedded when it is strongly related to day-to-day teaching practices, is designed to enhance pedagogy, is part of a continuous improvement cycle incorporated into the workday, aims to improve children's learning, and is connected directly to daily learning. Examples of job-embedded professional learning include a teacher working with a teaching coach to plan a lesson or a group of teachers meeting to investigate children's outcomes and discuss pedagogical strategies (Croft et al., 2010). To support these goals, professional development should

enhance teachers' knowledge about children's development and inspire teachers to reflect on their teaching (Guskey, 2003; Kennedy, 2014; Smith, 2012). In addition, it should emphasize core content and modeling of pedagogical strategies and offer teachers opportunities to actively learn new strategies (DeMonte, 2013).

One of the challenges teachers face is the lack of opportunities to learn from colleagues in a supportive, collegial setting structured for showcasing excellent practices. Many professional development designs that show improvement in teaching and learning contain some kind of collaboration among teachers in a school (DeMonte, 2013; Guskey, 2003; Kennedy, 2014; Smith, 2012). On a related note, trainers who conduct the workshop could return for feedback or follow-up (Hill, 2009).

Similarly, Smith (2012) recommended giving feedback to teachers on their practices and using an evaluation system for professional development. Such characteristics increase the chances of a deeper understanding that helps teachers improve (Stewart, 2014). Motivation to engage in professional development is another important factor that increases its benefits. Teacher motivation can be based on internal (personal) or extrinsic (external) factors, such as job requirements (Almutlaq et al., 2017).

In terms of technology, videos are best leveraged as part of professional development that contains other features as well (DeMonte, 2013). This strategy could include using remote professional development to link teachers to collaborators who are in different places. However, video analysis would not be workable in Saudi schools, especially for female teachers (men, including fathers, are not allowed in kindergartens in Saudi Arabia). Instead of recording and analyzing teacher interactions, in this study, I presented videos of other teachers in high-quality ECEC settings around the world.

Regardless of how well structured a model is, professional development can still be ineffective (Kennedy & Shiel, 2010), as characteristics of effective professional development can differ depending on context and teacher needs (Smith, 2012). The most

effective professional development focuses on subject-matter content, pedagogical

strategies, and classroom management methods and offers opportunities for teachers to

observe, experience, and try new methods and ideas (DeMonte, 2013; OECD, 2005). It

should also serve school goals and district standards (DeMonte, 2013).

Finally, professional development should be ongoing and sustained (Guskey, 2003;

Kennedy, 2014; Smith, 2012). Studies have found that when professional development

programs consisting of a single event (i.e., traditional programs) are replaced by longer-

term designs, teachers will more likely improve their practices (Jerald, 2012). For example,

in Yoon et al. (2007), teachers participated in such an activity for about 60 hours over the

span of six months, resulting in an increase in student achievement. Egert et al. (2018)

mentioned that professional development of 45 to 60 hours was more effective than other

periods of training.

One or more of the above features are almost always part of high-quality

continuing professional development, regardless of subject, grade, location, school, or

background of the teacher or students (Jerald, 2012). However, school context should still

be a key concern, as these characteristics show that professional development is connected

to the work of teaching, although the exact structure of professional development could

vary depending on the needs of different teachers, schools, and areas (DeMonte, 2013).

Although some studies on professional development have identified activities that can

influence teaching practices and child learning, these features do not guarantee teachers

will develop their teaching. The next section presents various models for professional

development that informed the present study.

Professional Development Models

Shabani (2016) noted that the seven most influential models of professional development

in the literature (mentoring, observation, scaffolding, inquiry, individually guided

activities, study groups, and involvement in a development process) were grounded in

Vygotsky's developmental theories. I followed Shabani's recommendations for designing and implementing the initiative adopted in the present study by linking its developmental aspects with social mediation (learning that occurs in a social context), a core tenet of Vygotsky's theories.

Professional development traditionally consists of one-off events, such as conferences and workshops (DeMonte, 2013). As a result, teachers are given little time or incentive to incorporate new practices into their classrooms (Malone & Smith, 2010). The main flaws of traditional models include the event being located away from the teacher's school and context and the same content being delivered to all teachers regardless of their individual needs and school context (Malone & Smith, 2010). This is an ineffective way to improve teacher practices and learning outcomes (Guskey, 2000; Malone & Smith, 2010; Smith, 2015). Even so, it remains the most popular model in education (Smith, 2015).

An emerging type of professional development that meets individual teachers' needs is the job-embedded model. The present study employed this model, along with other features found to be effective, such as observing and discussing classroom practices, collaboration among colleagues, feedback, and giving teachers sufficient time to learn and improve (DeMonte, 2013; Desimone et al., 2002). Zan and Donegan-Ritter (2014) confirmed the benefits of combining several features of professional development through an eight-month course that included workshops, video-based teacher self-reflection, peer coaching, and mentoring. The results showed improvement in teacher-child interactions regardless of whether teachers had a degree.

A variety of job-embedded professional development approaches (see Daniel et al., 2013) have been found to improve teaching and learning (OECD, 2016). A job-embedded model employs multiple strategies to engage teachers in learning, such as workshops, mentoring, collaborative feedback, reflection (Darling-Hammond et al., 2017; Pacchiano et al., 2016), videos (Major & Watson, 2017), social media such as WhatsApp (Cronje &

Izak, 2022), and professional learning communities (OECD, 2016). Furthermore, as noted above, professional development models that offered new knowledge and opportunities for teachers to reflect on their practices were effective at improving children's outcomes (Rogers et al., 2020a). Rogers et al.'s (2020a) review found that duration, frequency, and intensity of professional development were important factors in its effectiveness, although the evidence was inconclusive, requiring further research. Dunst (2015) concluded that there was a need for more studies about early childhood in-service (job-embedded) professional development to identify which key features in which combinations and under which conditions were most effective. Key features they listed included offering opportunities for teachers to reflect on their understanding of their practices, coaching, mentoring, feedback during in-service sessions, follow-up support to reinforce learning, in-service training, and follow-up to produce sustainable change.

As shown above, traditional models do not adequately address the needs and challenges of teachers seeking to help achieve Saudi Vision 2030 goals. Therefore, I employed a job-embedded model to design the initiative in the present study, including important features such as workshops, videos of high-quality interactions in kindergartens around the world, a learning community via WhatsApp, and opportunities for feedback and reflection.

Design of the Professional Development Initiative

The initiative was designed based on a sociocultural framework. According to Shabani et al. (2010) and Eun (2008), what Vygotsky claimed about students' learning in a school setting (the ZPD) is applicable to teachers, and the developmental theories of Vygotsky, resting on the notions of the social origin of mental functions, are relevant to teachers' professional development. An effective way to deliver such an initiative is a job-embedded program guided by an academic researcher acting as a mentor/trainer (Cummins, 2004; Onchwari & Keengwe, 2008; Rogers et al., 2020a, 2020b). Guided by the literature, the

researcher documented the primary objectives of the professional development program. This ensured the establishment of a model that would meet the individual needs of the participating teachers. Subsequently, the researcher established a scaffolded model that incorporated effective factors of professional development along with Vygotskian concepts explained earlier in this chapter.

Job-Embedded Model

As mentioned earlier, a job-embedded model employs multiple strategies, including mentoring (Darling-Hammond et al., 2017; Pacchiano et al., 2016). While ECEC faces numerous challenges in ensuring the quality of teaching practices, investing in professional development mentoring models can help address some of these issues (Onchwari & Keengwe, 2008). Mentoring is "a caring and supportive interpersonal relationship between: an experienced, more knowledgeable practitioner (mentor); and a less experienced, less knowledgeable individual (protégé or mentee); in which the protégé receives career-related and personal benefits" (Henry et al., 1994, p. 38).

According to Weaver (2004), mentoring can be an effective way to train teachers to adopt new practices, the main goal of the present study. Barth (2001) stated that changes in practices do not arise suddenly from one-time training sessions; instead, mentoring provides ongoing on-site support. Cummins (2004) claimed strong professional development programs depended on personal, ongoing relationships through mentoring approaches.

According to Onchwari and Keengwe (2008), understanding teachers' feelings about changing their pedagogy is important because change usually leads to resistance, but mentoring can show teachers the need to adopt practices introduced by the mentor. Mentoring also tends to get to the fundamental issues since the mentor is usually a colleague who understands the teachers' experiences and challenges. A collegial mentoring relationship and closeness lead to better understanding the teacher's concerns and

problems. This caring, supportive relationship can shift teachers' attitudes and eventually

practices (Onchwari & Keengwe, 2008).

Workshops

One of the most prevalent modes of professional development delivery is the workshop

(Brunsek et al., 2020). Workshops on their own fall under traditional professional

development, as discussed earlier; however, several programs targeting teachers'

knowledge about children's development and teacher-child interaction have used

workshops in combination with other approaches with positive results (e.g., Egert et al.,

2020; Siraj et al., 2023).

Combining workshops with on-site support may improve professional growth, as

workshops provide teachers with the knowledge and content of the initiative (Buysse et al.,

2009). The content of the workshops can be supported through handouts that outline,

organize, support, expand on, offer resources for, or provide follow-up to the main training

(Sakraida et al., 2005). Incorporating icebreakers can lead to a more positive and inclusive

environment, improved learning outcomes, and a more meaningful workshop experience

(Chlup & Collins, 2010). More information about the workshops in this study is given in

Chapter 3.

Workshops can be presented in different modalities to improve teacher-child

interaction quality (Pianta et al., 2008). Delifino and Persico (2007) found that some

teachers—when given the chance to choose between modalities—such as face-to-face,

online, and blended workshops—preferred face-to-face workshops. However, Fishman et

al. (2013) found that teachers and students exhibited significant gains in both online and

face-to-face modalities, with no significant difference between them.

Video Clips

Video discussion utilizes tenets of high-quality professional development (such as

modeling, scaffolding, and situated learning) and are also related to desired outcomes, such

as applying new ideas to teaching practices (Arya et al., 2015; Christ et al., 2014; Van Es & Sherin, 2010). According to Rubio-Alcalá et al. (2020), discussion and videos are effective components of teacher training.

Videos have gained popularity in professional development around the world because they can give teachers a shared focal point to interpret and reflect on teaching methods, children's learning, and subject matter (Borko et al., 2011). According to a scoping review by Major et al. (2017) that analyzed 82 studies, video technology was an effective tool for teachers' professional development. Its affordability and usability have contributed to its growing adoption. Such technology has the potential to enhance teacher learning by capturing the intricate details of teaching, allowing for a thoughtful examination of classroom practices, providing greater access to classroom events than traditional observation, and stimulating cognitive, emotional, and motivational processes (Major et al., 2017). The shift from analog to digital technology and the availability of video-equipped mobile devices have made video-capable technologies more accessible and user-friendly. Studies reveal that the use of video technology elevates teacher motivation, optimizes cognition, and improves classroom practice (Seidel et al., 2011).

Moreover, incorporating videos can support professional development by making it easier for teachers to understand new strategies; by watching videos of effective teaching in action, teachers can visualize how to implement these strategies in their own classrooms (Darling-Hammond et al., 2017). Promoting reflection and discussion about real classroom situations can also expose teachers to diverse perspectives (Marsh & Mitchell, 2014). Videos allow teachers to reflect on their own interaction strategies by comparing them to what they see in the videos. After watching a video, teachers can engage in meaningful discussions with their peers, sharing insights and personal experiences.

Videos can be easily accessed and shared, making them a convenient tool for professional development, whether through online platforms or showing them during

workshops (Gröschner et al., 2014). In addition, online videos can be accessed at any time for individual learning or group workshops.

Video-based professional development helps teachers improve their classroom practices by providing them with concrete examples of effective teaching strategies; videos can promote a shared understanding of effective teaching practices among teachers, as they can watch and discuss videos together and learn from each other's perspectives (Sherin & Han, 2004). Major and Watson (2018) also noted that video can be a valuable tool for in-service teacher professional development. Clear learning objectives, opportunities for collaborative learning and discussion, follow-up support, and resources are all characteristics of good continuing professional development (Darling-Hammond, 2017; Garet et al., 2001).

Feedback and Reflection

High-quality professional development frequently provides built-in time for teachers to think about, receive input on, and make changes to their practice by facilitating reflection and soliciting feedback (Darling-Hammond et al., 2017). Teachers' expertise can also be developed through feedback and reflection within a professional learning environment (Daniel, et al, 2013) aligning with the sociocultural theory approaches to learning (Vygotsky, 1979) that teachers use with their own learners. Feedback and reflection both help teachers thoughtfully move toward the expert's visions of ideal practice. According to Boud et al. (2013), reflection turns experience into learning. For these reasons, reflection was a key element in the present study.

Learning Community

High-quality professional development offers a place in which teachers can discuss their thoughts and work together (i.e., a learning community), frequently employing a job-embedded model; this helps them shape aspects of learning beyond individual classrooms, affecting whole school districts, institutions, and departments or grades thereof (Darling-

Hammond et al., 2017). WhatsApp can offer an online professional learning community for this purpose (Cansoy, 2017). Learning in a community can foster efficacy and confidence in teachers adopting and implementing new practices (Darling-Hammond et al., 2017). WhatsApp makes it easier to have conversations, communicate instantly, share resources (videos and articles), and engage in informal learning with the researcher and other participants. The use of WhatsApp promotes community building and a sense of connectivity. Given that WhatsApp is used by learners as an informal learning environment, the research emphasizes the importance of social media platforms in online learning experiences. In the context of online learning, creating a sense of connection is essential in teachers' professional development (Cansoy, 2017; Moodley, 2019). It should be noted that the workshops in this study were designed to be implemented online, face to face, or in blended learning.

Summary of Professional Development

Based on the literature, I sought to incorporate the best characteristics in a job-embedded professional development model (see Egert et al., 2020) that could be implemented in the Saudi context. These characteristics included workshops that could be delivered face to face or online, i.e., blended learning (Egert et al., 2020); videos (DeMonte, 2013; Major & Watson, 2017) representing high-quality interaction from various countries; a learning community to discuss and learn collaboratively (Darling-Hammond et al., 2017; OECD, 2016) using WhatsApp (Cronje & Izak, 2022); an emphasis on implementing interaction strategies (Darling-Hammond et al., 2017; Guskey, 2000; Malone & Smith, 2010; Smith, 2015) in class after workshops; available on-site support; feedback; and encouraging teachers to reflect on their practices (Darling-Hammond et al., 2017).

Theoretical Framework

Based on the literature explored in this chapter, a Vygotskian sociocultural framework was deemed appropriate for the present study. This framework for child development, which has been extended by other researchers to include teacher-child interaction (e.g., Bodrova & Leong, 2005; Bukhalenkova et al., 2022; Fernyhough, 2008), was particularly useful to understand teacher-child interaction quality, establish the professional development model of the study, and collect and analyze the data. The study therefore employed Vygotskian concepts, such as the ZPD and scaffolding, to analyze teachers' interactions.

Based on a Vygotskian sociocultural framework, the researcher expects more positive, productive experiences for children will come from an environment where their development, skills, and knowledge are actively and socially constructed through interaction with others. This environment is expected to offer productive, secure, high-quality child-teacher interaction, allowing children to take safe risks in social and academic experiences. The researcher used sociocultural theory to design an initiative based on the vital role interactions play in ECEC.

Vygotsky's emphasis on development occurring initially within a child's social plane and the extension of this theory to include teachers' professional development provided the researcher with a fruitful lens to examine teacher-child interaction quality in the Saudi context and then design the professional development utilized in the study. Thus, given the sociocultural framework of the study, the researcher considered the ZPD when designing the professional development model to scaffold teachers' professional development. This theoretical stance further enabled the researcher to observe the teachers' interaction quality in the Saudi context as they interacted with children and implemented the interaction strategies that the professional development targeted.

Chapter Summary

ECEC is a good investment to improve children's development and success only if it is of high quality (Penn, 2009). Numerous longitudinal studies have demonstrated the benefits of high-quality ECEC in the short- and long-term (OECD, 2021). These studies have shown that well-implemented ECEC enhanced children's development of cognitive, language, and academic skills, which play a vital role in adulthood, and that educational success was followed by success at work and a lower likelihood of criminal behavior (e.g., Adams et al., 2007; Camilli, 2010; Melhuish et al., 2008; Melhuish et al., 2015; Nores & Barnett, 2010; Wylie, 2006).

In this context, teacher-child interaction has been widely acknowledged as a key factor in classroom quality and a main contributor to children's social development and competence in school (Hamre & Pianta, 2007). Previous studies have shown positive outcomes associated with the quality of such interaction in kindergarten classes, for example (Burchinal et al., 2010). High-quality teacher-child interactions that benefit children are facilitated by three main dimensions: instructional support or pedagogical strategies and techniques, the learning environment, and social and emotional support (Hamre et al., 2012).

Based on the literature, and with sociocultural theory as a framework, this study incorporated five main interaction strategies into a professional development initiative: questioning, feedback, discussion, problem-solving, and sustained shared thinking. Two teaching approaches were also discussed: play-based learning and intentional teaching. Furthermore, studies have recently claimed teaching intentionally in play-based learning is a more effective pedagogical approach (AGDE, 2022; Leggett, 2023). Two supporting strategies that facilitate this approach are planning activities based on children's interests (AGDE, 2022; Birbili, 2019) and encouraging perseverance among children (Leonard & Garcia, 2020).

Various factors that have been found to impact teacher-child interaction quality also informed the study, including teachers' professional development and working conditions, communication and cooperation of parents, teacher-child ratio, and the role and requirements of administration. The study in particular acknowledges the role of professional development in teacher-child interaction quality (cf. Brunsek et al., 2020; Markowitz & Seyarto, 2023).

The initiative was conducted in Saudi Arabia given the lack of studies on effective ECEC professional development in that context. The relevant literature was explored to establish an effective model that could improve teacher-child interaction quality in this study. In the next chapter, I present the methods employed to carry out the study.

Chapter 3: Methodology

Introduction

In this chapter, I explain the methodology of the study, including the research questions, paradigm, research design, sampling and participants, data collection, design and implementation of the professional development initiative, data analysis, reliability and validity, ethical protocol, and limitations. It should be noted that while the term "trustworthiness" is often associated with ensuring the rigor and credibility of qualitative studies, in this context, I have used the terms "reliability and validity" to emphasize the robustness and rigor of the qualitative aspects of this study.

Research Questions

I used the Ice Cream Cone Model (ICCM) to illustrate the process of arriving at the research questions. The ICCM, presented by Brownhill et al. (2017), was based on Maslow's (1954) hierarchy of needs and designed to meet teacher trainers' professional needs. The application of the ICCM helped investigate teachers' perspectives and whether their practices changed after the initiative. Figure 3.2 shows the ICCM, highlighting aspects considered in this study (adapted from Brownhill et al., 2017, p. 4). The top of the figure shows the starting point of the study. The other five parts illustrate characteristics of good research questions (Davies, 2011).

Research questions were refined through a thorough examination of the context and literature. I delved into the study context by gathering information about relevant factors (Simons, 2014) such as, the extent of professional development in teacher-child interaction quality. By conducting a comprehensive literature review, I identified the gaps, limitations, and unanswered questions in previous studies (Hatch, 2023). This allowed me to formulate research questions that built upon existing knowledge and addressed areas requiring further investigation. I found no studies examining teachers' perceptions of teacher-child

interaction quality, their perceptions of professional development as a tool to develop this

interaction, or other factors affecting this interaction in a Saudi context.

Figure 3.2: The Study Explored within the ICCM

Main Focus of the Study
Teacher perspectives on interaction quality, including
interaction strategies, and implementing a new professional
development initiative not used before as a tool to develop
teacher-child interaction in a Saudi kindergarten

An Aspect of the Main Focus
Interaction quality, interaction strategies, PD as a tool to
develop TCIQ

Purpose
Investigate teachers' perceptions of TCIQ and if
their TCIQ changed after a PD initiative

Research Context
A Saudi kindergarten

Participants
Kindergarten teachers

Research
Questions

Based on the ICCM and the literature, I address a gap in knowledge about teacher-child interaction quality in Saudi Arabia by exploring the following primary research question: "How do Saudi early childhood education teachers perceive teacher-child interaction quality?" This main question is divided into five sub-questions:

1. How do teachers perceive their practices related to teacher-child interaction quality before the professional development initiative?

2. How do teachers perceive their practices related to teacher-child interaction quality after the professional development initiative?

3. Have any changes emerged in teachers' pedagogical strategies as a result of the professional development initiative?

4. What factors enable or constrain quality interactions according to teachers?

5. How do teachers perceive the professional development initiative as a tool to develop the quality of their interactions with the children in their classes?

Paradigm

A pragmatic paradigm was adopted to address a practical problem (see Creswell, 2007), i.e., adapt previous professional development solutions to a Saudi context while collaborating with teachers to assess the potential benefits of this solution. According to Creswell (2007), the pragmatic paradigm enables the researcher to focus on the research problem at hand, allowing one to use "all approaches available to understand the problem" rather than relying rigidly on specific methods (p. 231). Pragmatic researchers in education focus on identifying practical problems and finding innovative solutions (Kivunja & Kuyini, 2017). They prioritize real-world challenges faced by educators, students, or educational institutions. By adopting a problem-solving orientation, pragmatic researchers can develop creative approaches to improve teaching methods, enhance learning outcomes, or address educational inequalities. Pragmatic researchers are open to adapting their research approaches based on the specific needs and contexts of the education system. They recognize that different settings may require tailored solutions. By being flexible and adaptive, pragmatic researchers can creatively implement innovative strategies that are relevant and effective in diverse environments. Pragmatic research in education often involves collaboration between researchers, educators, policymakers, and other stakeholders. This collaborative approach fosters creativity and innovation by bringing together diverse perspectives and expertise. By engaging in interdisciplinary collaborations, pragmatic researchers can generate innovative ideas and co-create practical solutions that address complex educational challenges (Curren, 2009).

However, this paradigm is often criticized for neglecting philosophical assumptions, such as ontology and epistemology (Mertens, 2015). Therefore, prior to adopting this paradigm, I thoroughly assessed the four key components of a paradigm, namely ontology, epistemology, methodology, and axiology (Lincoln & Guba, 2000).

Ontology is concerned with the assumptions people make to believe something is real or makes sense, or the very nature or essence of the social phenomenon under investigation (Scotland, 2012). Researchers vary in their views of the social world, as some believe it follows patterns that result in specific predictable outcomes, while others believe human interactions are constantly contributing to the structure of the social world (Hesse-Biber & Leavy, 2011). The adoption of different ontological perspectives can result in varying understandings of social phenomena and consequently influence the chosen research methodologies. For instance, embracing a positivist ontological perspective entails believing in an objective reality where social phenomena can be scrutinized using scientific methods to uncover universal laws and anticipate outcomes. Conversely, a constructivist ontological perspective involves perceiving social phenomena as being shaped through human interactions, where reality is subjective and contingent upon context (Scotland, 2012). The latter was more suitable for this study since it aligned with sociocultural theory.

Epistemology is the study of the nature of knowledge and justification (Schwandt, 1997). In considering the epistemology of a study, researchers should ask themselves whether knowledge is something that can be acquired or has to be personally experienced. What is the nature of knowledge? What is the relationship between the researcher and knowledge? Such questions help researchers position themselves in the study context. According to Kivunja and Kuyini (2017), in trying to answer the above questions, if researchers "rely on data gathered from people in the know, books, leaders in organizations" (p. 27), the epistemology is grounded in authoritative knowledge, which aligned with the current study as it relied on data gathered from teachers. Epistemology is important because it helps researchers establish the reliability that they put in their data and influences how they go about uncovering knowledge in the social context they investigate. Given my background as an ECEC educator, I was not positioned as a "distanced

observer" in this study (Mertens, 2015, p. 38); rather, I was studying what interested me (Tashakkori & Teddlie, 2003, p. 30), which included my own felt need to develop teacher-child interaction quality as an educator-researcher.

Methodology refers to the research design, methods, approaches, and procedures used in a study to find out something (Keeves, 1997). The "methodology articulates the logic and flow of the systematic processes followed in conducting a research project. It includes assumptions made, limitations encountered" (Kivunja & Kuyini, 2017, p. 28). In considering the methodology for a research project, two important questions should be asked: "How can the researcher obtain the desired knowledge and understandings?" (Mertens, 2015, p. 10) and "How shall the researcher go about obtaining the desired data, …that will enable me to answer my research question and thus make a contribution to knowledge?" (Kivunja & Kuyini, 2017, p. 28).

Axiology refers to the ethical issues that need to be considered in research. This includes defining, evaluating, and understanding right and wrong behavior relating to the study. It considers the value the researcher will attribute to the different aspects of the research, such as participants, data, audience, and methods. To avoid ethical concerns and ensure the study was appropriate and beneficial, I submitted detailed forms to the ethics committees at Dublin City University and Princess Nourah University. After receiving ethical approval from them, I applied for and received the Saudi Ministry of Education's approval before implementing the study.

In essence, the current study offers a practical applied research philosophy (Tashakkori & Teddlie, 2003), which provides a sound rationale for the adoption of a pragmatic paradigm. This pragmatic stance influenced the choice of methods to study teacher-child interaction quality from teachers' perspectives.

Research Design

I employed a qualitative research design. According to Creswell and Poth (2016), qualitative research usually uses an emerging approach to investigate and collect data in a natural setting, sensitive to the people, places, and context under study. Qualitative data analysis operates through an inductive lens, aiming to uncover and establish emerging themes or patterns. The core purpose of qualitative research revolves around delving deeper into various facets of the social realm (Rossman & Rallis, 2012). Within this approach, the researcher's reflexivity is a key element (Creswell & Poth, 2016), positioning them as a pivotal conduit for conducting the research itself (Rossman & Rallis, 2012). By integrating participants' perspectives, this type of methodology offers a nuanced description and interpretation of intricate issues or phenomena. Furthermore, it contributes to the expansion of the existing body of knowledge or prompts calls for further actionable steps (Creswell & Poth, 2016). This research framework becomes especially fitting when the clear demarcation between the phenomenon and its contextual surroundings is not immediately evident (Yin, 2009).

Furthermore, I employed a bottom-up approach, which is an inductive qualitative data analysis (Soiferman, 2010). It starts with the raw data and progressively generates themes or insights from the data itself. This process avoids preconceived notions and allows patterns to naturally emerge. The researcher remains open to the unexpected and ensures that the findings are grounded in the data. The rationale for adopting an inductive approach lies in its ability to capture the complexity and richness of the researched phenomenon, as well as its potential to reveal novel insights that might be missed with a deductive approach.

The themes prioritized in the initiative were informed by sociocultural theory and major research-based teaching strategies highlighted in the literature: questioning (Siraj-Blatchford & Manni, 2008), feedback (Pushparatnam et al., 2021), discussion (Sylvia,

2009), problem-solving (Gross, 2005), and sustained shared thinking (Wall et al., 2015). All rely on social interaction and strong relationships between the teacher and child (Siraj-Blatchford et al., 2002). Additionally, my personal experience as a Saudi kindergarten teacher and then as a lecturer and supervisor of practicum students for several years in different public and private kindergartens, as well as the pilot study findings, also helped select and prioritize the initiative themes.

Based on the goals of the study, I employed a case-study approach. According to Creswell (2017), a case study is a qualitative methodology where a researcher attempts to understand in detail a real, life-bounded system called a case. Yin (2009) agreed that case-study research deals with real-life contexts and settings and provides a holistic understanding of a phenomenon. While this helps researchers understand a small number of cases with a much deeper degree of understanding, it does not allow researchers to make generalizations about how other related or similar cases may behave. As such, this approach matches the pragmatic paradigm under which I sought to explore ECEC teachers' perspectives on teacher-child interaction quality before and after a professional development initiative. To develop and implement the appropriate methodology, I followed the research strategy presented in Figure 3.1, taken from Saunders et al. (2015, p. 128).

This design was chosen for several reasons. First, the limited research on teacher-child interaction quality and teachers' professional development in a Saudi context makes a qualitative study more appropriate for exploring and understanding these aspects in Saudi Arabia. According to Merriam (1998), research in education should aim more to discover and build knowledge about phenomena rather than confirm or evaluate the current situation. Second, I aimed to provide deep and rich understandings of teachers' perspectives on teacher-child interaction quality in a Saudi kindergarten before and after a

professional development initiative, which aligns with one of the main features of qualitative research (Creswell, 2007; Merriam, 1998).

Figure 3.1: Research Strategy
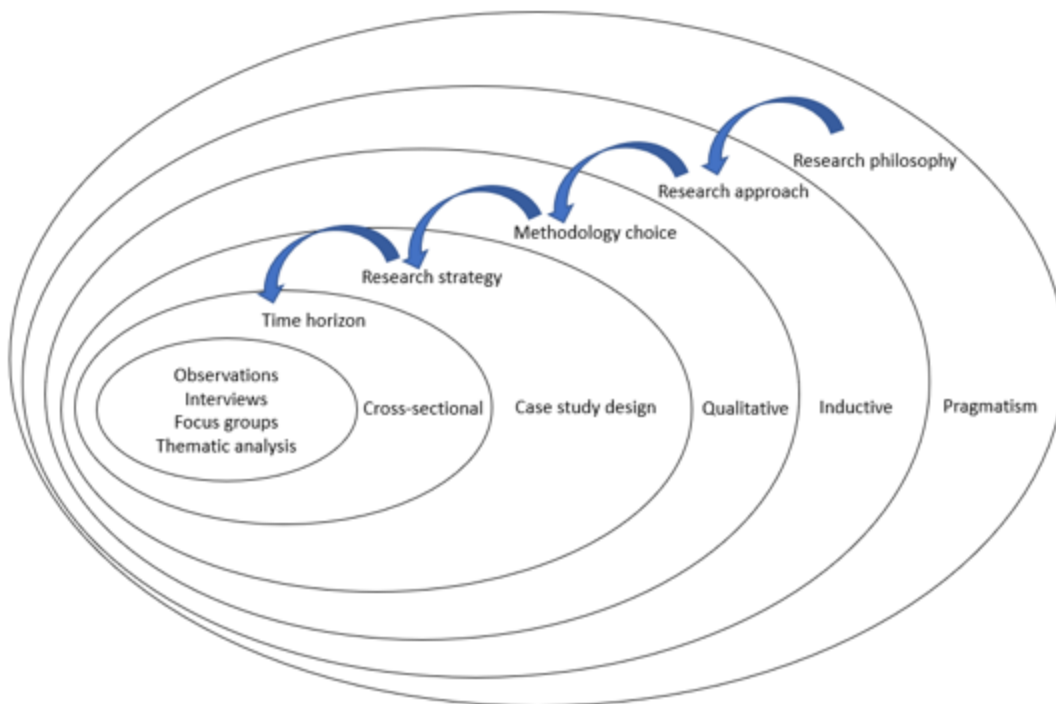
Third, the choice of data collection and analysis methods in a qualitative study is flexible, which provides rich information in a specific context (Merriam, 1998), thus helping the researcher better analyze the teachers' perspectives quality before and after the initiative. In addition, this flexibility gave me the chance to not only be a trainer delivering information to teachers like the traditional "sit and get" professional development model (Matherson & Windel, 2017) but also act as a teacher implementing the strategies of the initiative and examining its effects to develop teachers' practices and understanding. Individual interactions and discussions with and among the teachers during the initiative gave me the chance to understand the teachers' perspectives, the aims behind their practices, their understanding of the workshop content, and help them (if asked) to implement the target interaction strategies in their classes.

Furthermore, I selected a qualitative methodology over a mixed-methods or quantitative approach due to the small sample size (only nine teachers). Such a small

sample would have made quantitative methods less effective, limiting or negating the ability to statistically analyze variables in a precise, reliable, and meaningful way (Mertens, 2023). Furthermore, a small sample would limit how many variables could have been used, making it harder to accurately represent multidimensional data. I did not survey teachers in advance to establish a baseline understanding of their knowledge of the subject prior to creating the professional learning initiative. This was because a survey for a large sample would need to go through the Ministry of Education, and then the time needed for collecting and analyzing that data would have been less practical for the scope of this study. In addition, the limited research on teacher-child interaction quality and teachers' professional development in a Saudi context meant it would have been difficult to compare the findings of this study to prior work. Thus, a qualitative study was more appropriate for exploring these topics.

To ensure the initiative and data collection methods were well-designed and implemented, a pilot study was conducted in 2022 for six weeks prior to the main study. In this way, the pilot study helped increase the validity and reliability of the data. It was conducted in a different public kindergarten in Riyadh in five classrooms with nine teachers (and 25 children in each class). Teachers' participation was completely voluntary. After obtaining approval from the Ministry of Education (Appendix A), the school principal was contacted by phone to obtain the initial agreement for participation. A letter explaining the initiative and participants' role in it (Appendix B-1) was attached with an information sheet (Appendix C) and sent to the principal electronically. The principal welcomed the initiative and established a WhatsApp group with the teachers who had already agreed to participate (i.e., all the teachers in the school except one, who was on sick leave). A plain-language statement (Appendix B-2) and the consent form (Appendix B-3) were sent through the WhatsApp group to the teachers, and all nine participants filled out the consent form electronically as a Google form.

A specific consent form provided by the Ministry of Education (Appendix D) was required to be sent to the parents in addition to the plain-language statement (Appendix B-4) and study consent form for parents (Appendix B-5). All the parents in the five participating classes agreed to their children's participation in the study.

The pilot included a trial of the initiative I designed (Appendix B-6), helping refine its components (workshops, interviews, and focus groups) (see Roulston, 2010). All data collection methods (participant observation, pre-/post-initiative interviews, and pre-/post-initiative focus group) were included in the pilot study. It consisted of four professional development sessions (two hours for each session, totaling eight hours), in addition to short discussions, feedback, and reflection (about 15–20 minutes) after each of the five observations, for a total of about 10 hours of professional development for each teacher (see Table 3.1).

Table 3.1: Overview of the Professional Development Initiative (Pilot Study)

Week 1	Pre-initiative interviews	1–3 January 2022
	Pre-initiative focus group	4 January 2022
	Workshop 1: Introduction to the initiative	
Weeks 2–6	Participant observation	9 January 2022 to 10 February 2022
Week 3	Workshop 2: Learning environment	19 January 2022
Week 4	Workshop 3: General introduction to pedagogical (interaction) strategies in high-quality ECEC	26 January 2022
Week 5	Workshop 4: Questioning interaction strategy	31 January 2022
Week 6	Post-initiative interviews	6–8 February 2022
	Post-initiative focus group	9 February 2022

The pilot findings—based on the interviews, focus groups, responses to Vevox feedback questions after each workshop, and my reflections (Gamlem, 2015)—were discussed with my supervisors to inform the main study. As a result, some questions were added, clarified, or changed.

Sampling and Participants

A sampling method allows a researcher to give a systematic, transparent approach for selecting who will be requested to contribute data, as collecting data from the entire

population may not be practical (Mertens & Wilson, 2012). For the current investigation, a purposive sample was used since it allowed the researcher to choose a sample that met the unique research inquiry criteria (Cohen et al., 2017). The main purpose of sampling for a qualitative researcher is to gather detailed data that can explain and deepen the understanding of a phenomenon (Ishak et al., 2014). For the current study, I chose a public kindergarten in Riyadh for several reasons. In general, teachers' employment in public schools is more stable, making it more likely they will complete the professional development, while in private schools, there is no guarantee a teacher will stay in the same school and complete the professional development. In addition, the chosen kindergarten's classes, playground, and all other facilities met standards for ECEC quality according to The General administration of Early Childhood Education (2009).

To clarify the context of the participants, I provide a portrait of the kindergarten below, highlighting important factors that may have influenced the implementation and findings of the initiative.

Portrait of the Kindergarten

The kindergarten consisted of nine classes, six of which participated in the study. Each class had two main teachers, with a total of 18 main teachers working in the school in addition to one substitute teacher. A high-quality learning environment with appropriate safety standards was ensured by adhering to the guide for physical environment prepared by the General Administration of Early Childhood Education (2009). The learning environment included a variety of materials and tools that were continuously updated. All classrooms were spacious, clean, and tidy, with good lighting and large windows covering almost an entire wall. Each class observed in this study was identical in terms of the number of main learning corners. There were 10 main corners: art, sound and movement, relaxing, puzzles and manipulatives, exploring (science), dramatic play, blocks, library, literacy (reading and writing), and cooking. Furthermore, there were temporary corners,

such as a fashion corner associated with the study of clothes (according to the curriculum in use). The sand and water corner was considered temporary in some classes and permanent in others.

The corners were divided appropriately. That is, the noisy ones were close to each other, and the quiet ones were close to each other. Each corner had enough space and clear boundaries. The furniture was in excellent condition, suitable for the size of children and the number allowed in each corner. In the art corner, there was a suitable chair for the teacher, as well as in the circle. There were shelves outside the classroom, and each child had their own shelf with their name and photo on it.

The kindergarten followed the self-learning curriculum, underpinned by play-based learning (Ministry of Education, 2005). The teacher-child ratio was similar in most classes, around 28–30 children and two teachers in most periods, except for mealtime (breakfast) and outdoor playground time (recess), in which only one teacher was present. The teachers usually started the school day by welcoming the children and asking a closed question that children answered with a yes or a no (the question of the day). The teachers then proceeded to circle time, outdoor playground time, mealtime, free play in the corners, and the last meeting.

All teachers were specialized in early childhood education. Three held a post-high-school diploma and six had a bachelor's degree. Six had more than 20 years of experience in early childhood education, two had 5–10 years of experience, and one had 11–20 (see Table 3.2). It should be noted that teacher professional development in Saudi Arabia normally takes place in independent training centers affiliated with the Ministry of Education or certain Saudi universities (Al-Jadidi, 2012). The duration of training usually ranges from one to several days (Bin Mubrad, 2021).

Table 3.2: Teacher Demographics

Teacher	Children in class	Qualifications		Specialized in early child care	Years of experience		
		BA	Post-high-school diploma (2+ years)		5–10	11–20	>20
Nawal	30	*		*	*		
Hessah	28		*	*			*
Moneerah	30	*		*	*		
Layla	30	*		*			*
Rana	28	*		*			*
Reema	28		*	*			*
Fatmah	28	*		*			*
Hanan	28		*	*			*
Maryam	Substitute	*		*		*	

Participant Invitation and Consent

Teachers' participation was completely voluntary. After obtaining the approval of the

Ministry of Education (Appendix A), I contacted the school principal by phone to obtain

initial agreement to participate. A letter explaining the initiative and the teachers' role

(Appendix E) and an information sheet (Appendix C) were sent to the principal. At the

request of the principal, I met with all 19 teachers at the school and explained the goals of

the initiative and their role. At the end of the meeting, nine teachers volunteered,

representing six out of nine classes (see Table 3.3).

Table 3.3: Participants and Their Associated Class (Anonymized)

Teacher	Class
Nawal	Sunshine
Hessah	Rainbow
Moneerah	Colors
Layla	Flowers
Rana, Reema	Bees
Fatmah, Hanan	Birds
Maryam	No class (substitute teacher)

A specific consent form provided by the Ministry of Education (Appendix D) was

required for parents in addition to the plain-language statement (Appendix F) and the main

parental consent form (Appendix G). Parents were contacted by the kindergarten

administration, based on the instructions of the Ministry of Education. The parents of all

children in the six participating classes gave consent for their children to participate in the study.

I created a WhatsApp group to facilitate communicating with the participating teachers. The plain-language statement (Appendix H) and the consent form as a Google form (Appendix I) were sent through this group, and all nine teachers filled it out.

Data Collection Methods

According to Moser and Korstjens (2018), the most common data collection methods in qualitative research are participant observation, interviews, and focus group discussions. Thus, I incorporated those methods into this study, as discussed below (see Table 3.4).

Table 3.4: Methods Timeline

Methods	Week	Time
Individual pre-initiative interviews	Week 1	9 x 1 hours
Pre-initiative focus group	Week 1	1 x 2 hours
Classroom participant observation	Weeks 2–13	9 Observations x 6 classes x 2 hours for each observation
Individual post-initiative interviews	Week 13	9 x 1 hours
Post-initiative focus group	Week 14	1 x 1.5 hours

Participant Observation

Observation, as explained by Robson (2002), is a meticulous process of watching and documenting individuals' actions within a specific context. This involves using tools such as note-taking, checklists, and audio or video recordings to vividly describe unfolding events, analyze recurring patterns or trends, and interpret the underlying motivations or significance of observed behavior. Cohen et al. (2017) framed observation as a formidable instrument for attaining profound insights into the dynamics of everyday social scenarios. Consequently, this method aligned with the sociocultural framework adopted in the present study.

Robson (2011) saw observation as a method that supports findings gathered from other methods. In this study, observation supported teacher interviews and focus groups. Observation can be done in two ways: 1) when the observer is not a participant and 2)

when the observer is a participant who "immerses himself/herself in a group for an extended period of time, observing behavior, listening to what is said in conversations both between others and with the field worker asking questions" (Bryman, 2004, p. 392). Participant observation thus involves being immersed in a social setting or group and observing day-to-day activities and interactions (Dewalt & Dewalt, 2010; Kawulich, 2005; Mulhall, 2003). This method assumes that researchers can learn from observation while being actively engaged in participants' day-to-day experiences to understand their behavior and points of view (Dewalt & Dewalt, 2010).

For the reasons outlined above, I used participant observation, a method with roots in ethnographic research, which aims to help the researcher understand the perspectives of study participants (Mack, 2005). This aim aligns with the research question investigating whether changes emerged in teachers' pedagogical strategies as a result of the professional development. With this method, I aimed to understand each teacher's perspective holistically and examine how professional development could develop teachers' perspectives and practices related to teacher-child interaction quality. Qualitative researchers assume there are multiple perceptions within any phenomenon in a community and try to understand those perceptions through observation or by observing and participating in the daily activities of the community (Mack, 2005). In this study, I engaged as a participant observer to learn what teacher-child interaction quality looks like in the natural setting of a kindergarten while recording careful, objective notes about what I saw in a field notebook (Mack, 2005). See Appendix J for examples.

In this study, I chose to be a participant observer and be introduced to children in each class I observed as a frequent visiting (or assistant) teacher. This choice was made so I could be closer to teachers and children and practice the interaction strategies introduced in the initiative.

I observed the classes for about two hours per visit, with a total of nine visits for each of the six classes (see the implementation plan in Appendix K). In each observation, I participated as a visiting teacher, interacting with children and helping teachers if needed. I wrote about almost all interactions briefly while in the class and completed the notes immediately after each observation. In addition to general notes, I focused on specific objectives in each visit based on the five interaction strategies of the initiative (questioning, feedback, discussion, problem-solving, and sustained shared thinking). During and after each observation, I had short discussions with teachers, reflecting on or clarifying their point of view or the goals of their interactions with children. These discussions were also written in the notes. The observations were documented through written field notes only.

Several considerations made participant observation an appropriate method for this study. At the beginning, it enables the development of positive relationships between the researcher and teachers, whose assistance and consent are crucial (Mack, 2005). Observation can also enhance other methods (Mack, 2005; Robson, 2011). For instance, the cultural understanding obtained through observation helps researchers ask appropriate follow-up questions during interviews (Mack, 2005). Participant observation can be done before, after, and during data collection and analysis (Mack, 2005).

Observations were documented through field notes recorded in field notebook (Mack, 2005). Field notes included teacher-child interactions during daily activities in the classroom and on the playground. I wrote brief field notes discreetly during participant observation in a small notebook or soon afterward (Mack, 2005), depending on the situation. Following the suggestions of Mack (2005), as soon as possible after collecting observation data, I expanded my notes into as descriptive and detailed a narrative as possible and then put the notes into an encrypted computer file.

Keeping a notebook helped me reflect on the observations and document my thinking and changing practices during the initiative. It is also important to write reflections about the research in general and participant practices.

Interviews

Shirley (2015) maintained that one of the most important tools for educational change today is to listen to the teacher's voice. Thus, I conducted pre- and post-initiative interviews to explore teachers' perspectives. In this type of research, the interviewer asks one or more interviewees generally open-ended questions and records or writes the answers (Creswell, 2016). Since I did not receive permission from the Ministry of Education to audio record the interviews, I made written notes of teachers' responses. Interviews in qualitative research can be used for different purposes (Kvale, 2008), such as in this study to understand teachers' perceptions of teacher-child interaction quality, to deepen the understanding of it in Saudi kindergartens, to collect rich descriptive data, and to examine whether professional development can develop this interaction.

I used semi-structured interviews, as they allow the interviewer to have a set of planned questions that can be changed during the interview by adding follow-up questions, changing the order of questions, and omitting questions (Kvale, 2008). However, the interview questions were loose enough so that the interviewee could mention some important points that might be outside the list of questions developed by the researcher (Cohen et al., 2017) (see Appendices L and M).

In designing the interview, I was guided by Bryman's (2016 pp. 251-256) rules of thumb to increase validity and reliability. The questions asked in the pre-initiative interviews were the same as those in the pilot study. The questions were based on the literature review in addition to my experience with ECEC quality in Saudi Arabia. The questions were inclusive enough to capture a general and holistic perspective about ECEC quality, including teacher-child interaction. The questions were also reviewed and honed in

light of feedback from supervisors before and after the pilot study. The questions asked in the post-initiative interviews were a revised version of the ones in the pilot study.

Each interview began in a conversational style, asking general questions about teachers' perceptions of ECEC quality before moving to teacher-child interaction quality, the professional development they had experienced, and their perceptions of how professional development can help them develop their interaction quality. The questions were tailored to reflect more specific interaction strategies as the interviews developed.

The first set of interviews were held in Week 1. I interviewed each teacher individually by phone at a time convenient to them. Each interview took about one hour, depending on how the dialogue developed and how focused the teachers were in their responses. Teachers were informed that the interviews would be noted and stored on the researcher's encrypted computer, that no one would read the interviews except the researcher and her supervisors (supervisors read an example of a translated version of the interviews since they were in Arabic), that all data collected would be presented anonymously, and that they could withdraw from the interview at any time and could choose not to answer any question. This ethical concern was mentioned by Mertens (2015) as "turning over control" to the participant (p. 386). All these matters were articulated upfront as ethical concerns when seeking approval from Dublin City University and Princess Nourah University.

The first set of interviews was mainly related to the first research question, investigating teachers' perceptions of teacher-child interaction quality. The second set investigated the second, third, and fourth research questions regarding how teachers perceived their practices related to teacher-child interaction quality and if any changes emerged in teachers' pedagogical strategies as a result of the professional development.

I found that data saturation was achieved with a sample of seven interviews. This aligned with a study conducted by Guest et al. (2006) on data saturation and variability in qualitative research.

Focus Group Interviews

Focus groups are a data collection method where participants are encouraged to co-construct meaning of a given phenomenon within a group (Bryman, 2016). In the current study, this method was used with all participating teachers. According to Tang and Davis (1995), the size of a focus group should be based on the aims of the study. Since I sought to investigate teachers' perspectives of teacher-child interaction quality in depth, a small number of participants should be sufficient to reach this goal. Other factors in determining focus group size are the number of questions to be asked, the time given for each question, the format of the focus group session (discussion group), and the duration of the session (90–120 minutes). In Peek and Fothergill (2009), focus groups, which included three to five participants, "ran more smoothly than the larger group interviews" they conducted (p. 37). However, several studies that investigated teachers' perceptions found that focus groups of 10 or fewer teachers were still effective (e.g., Gehris et al., 2015; Rosen et al., 2017; Zinsser et al., 2015). Therefore, I decided that nine teachers would be suitable for the study.

Two focus groups were conducted, one before the initiative and another after (Appendices N and O). The pre-initiative focus group focused on capturing teachers' perspectives about teacher-child interaction quality and professional development in general. The questions that led the group discussion were similar to the individual interview questions, starting with open-ended questions followed by the teachers' opinions of the initiative and how their practices had changed (Sideras, 2017). The focus group questions from the pilot phase were reviewed and further developed for the main study. The pre-initiative focus group was held in the kindergarten during work hours and took

about two hours, while the post-initiative focus group was held online via Microsoft Teams

after work hours, at the request of the teachers, and took about 90 minutes.

I was aware that the focus group data might not provide clear and direct

information as participants sometimes filter information while in a group and can fail to

say things directly (Creswell, 2007). Therefore, the pilot study and data triangulation were

essential to ensure the validity and reliability of the findings.

Designing the Professional Development Initiative

To design the initiative, I used Arena Blended Connected Learning Design (ABC LD).

This is a collaborative program and designing module method created at University

College London in 2015 that takes the form of a storyboard that visually maps out the

intended learning experience of a module in a simple document format (Young & Perović,

2016). ABC LD is used widely across education to develop new programs or review

existing ones and is particularly useful for online or blended learning programs. Before

selecting this model, I examined other models, such as ADDIE (Dousay & Logan, 2011),

ASSURE, and Design Layers (Chen, 2011). However, ABC LD appeared more

appropriate to this study because of its flexibility, integration of new technology, emphasis

on collaboration and social learning, and learner-centered design. It offers a framework

that allows for personalized learning pathways, active participation, and the integration of

digital tools and resources. All of these characteristics aligned with the objectives of the

study. Thus, ABC LD informed the design of the professional development initiative,

which included blended learning. The initiative was designed based on the ECEC literature

on teacher-child interaction quality and professional development and aimed to develop the

teachers' understanding and practices.

ABC LD enabled me as a researcher to develop a storyboard visualizing the learner

journey based on their activities throughout the study, build from the participants' existing

practice, and identify opportunities for blended learning, review assessment, and feedback

(Young & Perović, 2016). In this process, teaching practice is discussed and opportunities to enhance the learner's journey may be identified and agreed upon (Young & Perović, 2016). ABC LD gave me the opportunity to plan for blended learning (face-to-face and online workshops), using social media (YouTube) and online learning sources (reading articles) (see Appendix P). According to Gormley et al. (2022), the strongest selling point of ABC LD is the clarity of structure it provides that allows the team to discuss and agree on a range of potential learning activities, technologies, and assessments. Those points encouraged me to use ABC LD to ensure the professional development plan's clarity for the supervisors and get effective feedback about each element in the plan.

I revised each learning activity and clarified how I assigned the content to the learning types to ensure effective delivery. This process involved several steps (see Young & Perović, 2016). I analyzed the content and identified the learning objectives, considered the desired outcomes to determine the most suitable learning type for each piece of content, evaluated the objectives associated with each storyboard, assessed whether the objectives aligned with the intended learning outcomes, and determined whether they could be effectively achieved through the chosen learning type. I reflected on each element in the storyboard in terms of delivery effectiveness. I assessed how well the chosen learning type supported the content and whether it facilitated learner engagement and comprehension.

ABC LD is based on Laurillard's (2012) Conversational Framework to encourage the use of several learning activities across six identified learning types: acquisition, discussion, collaboration, investigation, practice, and production. Acquisition refers to learning through reading, watching, or listening (e.g., during the professional development, the teachers were asked to read articles prior to the workshops, watch videos before and during the workshops, and listen to the presentation). Investigation involves exploring a topic in more depth (e.g., the teachers learned in depth about teacher-child interaction

quality, detention, components, and strategies). Practice involves applying knowledge and skills in practical situations (in this case, the teachers were asked to implement what they had learned in their classes). Discussion refers to the exchange of ideas and perspectives among learners (e.g., discussion during the workshops, with the researcher during or after the observation, and in the WhatsApp group). Collaboration refers to working together with others to achieve a common goal (e.g., collaboration among teachers to plan activities that involved the interaction strategies represented during the workshops). Production involves creating something new based on the knowledge and skills gained through other types of learning (e.g., finding solutions to certain hindering factors, such as the teacher-child ratio, based on the workshop content and discussions). These six types of learning offered several opportunities for the teachers to engage with the professional development content. This is in line with Kennedy's (2016) claim that it is important to intellectually engage teachers with professional development content rather than simply presenting information to teachers.

Since discussion was an essential component of this professional development program, the initiative relied mainly on discussion to get participants engaged in the workshops in collaborative learning. Discussion has been cited as an effective professional development strategy in several studies, such as Bin Mubrad (2021) and Darling-Hammond et al. (2017). The initiative offered several chances for teachers to discuss their perceptions and practices regarding teacher-child interaction quality during the workshops, the focus groups, after the observations (with the researcher), and in the WhatsApp group with the researcher and other teachers.

Another important component is the practical content of the workshops that is applicable in the classes. Interaction strategies were the focus of the initiative, with examples from videos (international exemplars of high-quality interactions in ECEC) and the researcher and teachers' experiences. The teachers were asked to focus on

implementing one strategy after each workshop and share their reflection on it with the researcher and other teachers.

Watching video clips of high-quality teacher-child interactions from different countries around the world—such as the U.S., the U.K., Australia, and China—was an essential component of the workshops. Since all videos were in English, I had to translate them for the teachers. Using videos in teachers' professional development is an effective way to create discussions among participants (Major & Watson, 2017). All of these components were considered when I used ABC LD to design the initiative, the different types of learning (acquisition, investigation, collaboration, discussion, practice, production), prepare teachers before sessions, encourage them to participate in the sessions actively, and reflect on each session. The objectives of the initiative were as follows:

- Developing teachers' content and pedagogical knowledge about teacher-child interaction quality.
- Providing teachers with materials that help them develop their teacher-child interaction quality, such as short articles to read before the workshops (translated articles since related Arabic articles were limited), short videos of international high-quality interactions, and the PowerPoint slides used in the workshops.
- Encouraging the teachers to be more reflective about their practices by encouraging them to write out their reflections and talk about their practices during the workshops or individually with the researcher after the observations.
- Encouraging the teachers to implement high-quality interaction strategies in their classes.
- Highlighting the Ministry of Education's goals and education's role in Vision 2030 with a focus on ECEC teacher-child interaction quality.

As mentioned above, ABC LD offers different types of learning that enabled the researcher to design a unique learning experience for the participants based on social interaction with the researcher and the other participants. The initiative offered participants opportunities to socially interact with the researcher and other participants in various ways, as described above, and solve problems as a group. As an example, the teachers were asked to read translated articles before the workshops, discuss them as a group in the WhatsApp group and in the workshops, and connect what they read to their reality. As another example, the teachers during and after the observations asked the researcher questions about the implementation of interaction strategies and how they could develop their practices and plan activities. These opportunities for learning aligned with Shabani's (2016) claim that Vygotsky's ZPD was applicable to teachers (see the theoretical framework in Chapter 2).

By aligning the delivery methods with the literature and considering the context, the initiative aimed to optimize participant learning experiences, foster meaningful content engagement, and support the transfer of knowledge into classroom practice. The readings (Wongkietkachorn et al., 2014), videos (Gröschner et al., 2014), and presentations (Borko, et al., 2011) in the initiative were thus justified based on the ABC LD model and literature. The specific context of the initiative further guided the selection of these delivery methods to cater to participant preferences, needs, and technological capabilities.

Workshop Components

The professional development included six workshops. The first was an introduction to the initiative. The second was about the learning environment. The third was about pedagogical interaction strategies in high-quality ECEC. The last three workshops were about specific interaction strategies: questioning, feedback, discussion, problem-solving, and sustained shared thinking. The first three workshops were face to face and the last

three were online (for more details, see the implementation section). Each workshop had specific learning objectives.

The ABC LD included several components to support the teachers' learning through the six learning types that ABC LD relies on. The researcher employed a variety of methods to engage teachers and create an interactive and collaborative learning environment. The researcher leveraged extensive experience using PowerPoint as a powerful tool to enhance the learning experience. By incorporating dynamic slides, engaging graphics, and multimedia elements, the researcher effectively communicated complex concepts and facilitated active participation from teachers. Those supporting methods included workshop handouts, icebreaking activities, reflection notes, short videos, feedback and reflection questions, and communication and discussions via WhatsApp. The following subsections briefly explain why and how those elements were used.

Workshop Handouts

A handout is any learning material given to learners as an advanced organizer to provide technical terminology and basic information that learners should read either at or prior to the beginning of the lecture (MacLean, 1991). Handouts have been a primary tool to help learners understand lectures (Wongkietkachorn et al., 2014). Having access to handouts during lectures is associated with several benefits. It allows for less notetaking; therefore, learners have more time to listen and think during a lecture (Wood, 2003). A handout outlines, organizes, supports, expands on, providing learners with resources, or provides follow-up to training. It is important for participants to receive handouts, as they provide reinforcement and facilitate long-term retention of information. Handouts can be used to remember, extend knowledge, form a basis for work, and prepare for future lectures (Sakraida et al., 2005). In Wongkietkachorn et al. (2014), 83.6% of learners reported lower concentration in lectures without handouts. Wongkietkachorn et al. concluded that

handouts were essential in lectures to increase learner concentration and understanding and improve the quality of the lectures.

To benefit from these advantages, I designed a handout for each workshop that clarified the learning objectives, gave important definitions, and highlighted the main components of the presentation. Attached to this handout was a short Arabic translation of an article related to the workshop topic or any other materials I thought would help the teachers understand or implement the workshop content (for example, see Appendix Q).

Icebreaking Activities

An icebreaking activity can create a more comfortable teaching and learning environment (Kasimova, 2022). Such activities are a way of improving motivation and learning and can take various forms, such as physical games or sharing exercises, which encourage engagement, connection, and cooperation. By fostering relationships and trust, icebreakers can create a more meaningful workshop experience. Additionally, they can set the stage for future interaction, as participants are more inclined to continue engaging with each other during and after the workshop, creating a supportive learning network (Chlup & Collins, 2010).

For these reasons, all workshops started with icebreaking activities (see Appendix P). For example, the first involved finding commonalities between attendees, including the researcher. A list of 20 things on Vevox was used to find and show these on the screen.

Short Videos

One of the main aspects of the initiative that aligned with sociocultural theory was its collaborative nature. Collaborative engagement is a crucial element of teacher professional development (Borko et al., 2011; Darling-Hammond et al., 2017; Marsh & Mitchell, 2014). When teachers participate collaboratively, they are able to interact with a community of learners, openly communicate ideas, work together to solve problems, and share techniques, information, and expertise (Cordingley et al., 2015), and videos can facilitate

this atmosphere (Gröschner et al., 2014). In this collaborative atmosphere, a trainer connects agreements and disagreements to the professional development topic (such as interaction strategies), and concentrates on the program's structure (van Es, 2012). The link is particularly strong in professional development that includes video material.

Each workshop was supported by a number of videos (see Appendix P under the Links column). The videos were used to explain the workshops' content with real examples from high-quality kindergartens around the world. They enabled the teachers to view real classroom situations demonstrating excellent examples of interaction strategies. Following this, I helped them engage in collaborative reflection, where they learned from each other and gained new perspectives (Gröschner et al., 2014). These videos showed the teachers how to handle different scenarios effectively, such as choosing effective interaction strategies, classroom management, and children's engagement. Teachers gained insights into various teaching strategies and discussed how to adapt them to suit their own classes (cf. Borko et al., 2011). Through videos, teachers were exposed to diverse perspectives, allowing them to see and understand a range of interaction strategies. This encourages teachers to be open-minded and adaptable, as they choose strategies that align with their own classes (Borko et al., 2011).

The videos were mainly from YouTube educational channels or from the SIREN Films (n.d.) website. All videos were in English since I could not find Arabic videos that would serve the learning objectives. I translated the videos for participants orally during the presentation or presented a written translation during the presentation or via WhatsApp. I also gave a tutorial about how to do auto translate from English to Arabic in YouTube, noting that this feature was not available for all videos and was not always correct or easy to understand.

As an example of using videos to support the workshop's content, in Workshop 5 (problem-solving), five videos were listed in the ABC LD storyboard (see Appendix P);

the first video was planned to be discussed on WhatsApp, made possible by sending a link (with a written translation) a day before the workshop and asking the teachers to discuss the video with the group. The purpose was to give teachers an idea about the upcoming workshop's topic, let them discuss it, and give me a starting point to lead the discussion during the workshop.

Feedback and Reflection

Aligning with Darling-Hammond et al. (2017), I factored in time for teachers to think about, receive input on, and make changes to their practices by facilitating reflection and soliciting feedback. I also encouraged them to share their notes with me individually or with the group to get feedback. Other opportunities for feedback and reflection were when I visited the classes and had short discussions during or after the observation and in the WhatsApp group. Based on the Bournemouth University (n.d.), I designed forms for reflection notes in the workshops and classes and gave several copies to the teachers at the beginning of the initiative, as well as an electronic copy via WhatsApp. Teachers had the opportunity to give feedback on each workshop via Vevox. They were asked to rate the workshop, point out advantages and disadvantages, offer suggestions for the next workshops, and offer suggestions to improve the initiative if it were presented in the future to another group.

Communication and Discussion via WhatsApp

Web 2.0 technology has made web platforms more dynamic and fueled the expansion of virtual communities of practice (Moodley, 2019). Due to its accessibility and simplicity of communication, WhatsApp has grown to be a popular tool for teachers' professional development (Cansoy, 2017; Moodley, 2019). This platform offers a collaborative environment where learners can share resources, ask questions, get feedback from their colleagues (Cansoy, 2017), and discuss and reflect on what they learn (Moodley, 2019). Instant chatting and information sharing are made possible through real-time

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communication, which promotes a sense of support and community (Moodley, 2019).

Furthermore, teachers can upload and exchange files, links, and multimedia content

(Muhammad, 2022).

Implementing the Professional Development Initiative

The professional development and data collection methods were implemented as outlined

in Table 3.5. However, the original implementation plan was adjusted based on the

teachers' requests, and Table 3.5 displays the final implementation plan. Prior to the

initiative, during a meeting, the teachers made it clear that they would not submit anything

in writing to me but were willing to share their personal notes and participate in workshop

discussions. Nevertheless, copies of the forms (two reflection note forms for workshops

and in class) were provided to them for their reference. The teachers had previous

experience with research that had placed high demands on them.

Table 3.5: Overview of Professional Development Initiative Implementation

Week	Initiative Content	Date
1	Pre-initiative interviews	13–14 March 2022
	Pre-initiative focus group	15 March 2022
	Workshop 1: Introduction to initiative (2 hours face-to-face)	16 March 2022
	Workshop 2: Learning environment (2 hours face-to-face)	17 March 2022
	Workshop 3: General introduction to pedagogical (interaction) strategies in high-quality ECEC (2 hours face-to-face)	17 March 2022
2–13	Participant observation	20 March 2022 to
	9 observations x 6 classes x 2 hours for each observation	19 June 2022
3	Workshop 4: Questioning, feedback, and discussion strategies (2.5 hours online)	31 March 2022
5	Workshop 5: Problem-solving (2 hours online)	13 April 2022
8	Workshop 6: Sustained shared thinking (2 hours online)	18 May 2022
13	Post-initiative interviews	20–23 June 2022
14	Post-initiative focus group	26 June 2022

Another change made to the original plan was the timing of the workshops.

Initially, there was one week between the first three workshops and two weeks between the

last three workshops. However, the teachers requested to have the first three workshops

condensed into two days during the children's vacation week to take advantage of that

time.

The workshops were designed to be delivered online, face-to-face, or through blended learning. The teachers were given the opportunity to choose the format that suited them best. They decided to have the first three workshops in a face-to-face setting and the final three online using Microsoft Teams. They planned to agree on suitable dates and times for the online workshops through the WhatsApp group. Due to their busy schedules during the day, they opted to have the last three workshops in the evening after school.

In the original plan, there were supposed to be biweekly mentoring sessions with each teacher, which was considered an important part of the initiative based on the literature (e.g., Darling-Hammond et al., 2017; Pacchiano et al., 2016). However, the teachers informed me that they would not have time for these sessions. Instead, they suggested having short conversations during and after observations to receive feedback on their practices or to share their reflections.

The initiative began in Week 1 with pre-initiative individual interviews conducted over the phone with all nine participants, followed by face-to-face focus group sessions in the kindergarten building. The first three workshops were conducted in the last two days of Week 1. A day or two before each workshop, I sent the workshop handout via WhatsApp, which included the workshop objectives, main components, a summary of an English article related to the workshop content translated into Arabic, and reflection note forms. Additionally, one or two video clips related to the workshop content were shared. The teachers were encouraged to read the handout and the article before the workshop and to watch the videos and share their reflections in the WhatsApp group. These resources served as an introduction to prepare the teachers for the workshops.

Each workshop started with an icebreaking activity, followed by a review of the previous workshop (except for the first workshop). The teachers discussed their implementation of the interaction strategies, specifically in Workshops 5 and 6. The workshop objectives and outlines were presented, and the group engaged in discussions

about the articles they had read. The teachers' discussions about the videos and articles helped me identify their existing knowledge and needs, allowing for a focused presentation and discussion during the workshops. This approach aligned with sociocultural theory, particularly the ZPD and scaffolding.

Although the workshops included a presentation, the emphasis was on discussion and collaborative learning. The videos provided in each workshop enabled opportunities for group discussions and collaborative learning. The group watched the videos together and discussed the teachers' interactions in the videos, as well as how to implement these interaction strategies in the Saudi context, specifically in their kindergarten. In addition, the teachers were encouraged to share examples from their own experiences during these discussions, and I also shared relevant examples from my experience in Saudi and U.S. kindergartens when appropriate.

At the end of each workshop, after reviewing the learning objectives and ensuring they were achieved, I asked the teachers to implement what they had learned. They were informed that I would support them as needed, including helping with planning, providing feedback for further development, and facilitating reflection on their practices. The professional development was tailored to each teacher's needs, and I worked with them based on the ZPD and scaffolding (Eun, 2008; Shabani et al., 2010; Vygotsky, 1979). As a participant observer, I was present before and after observations to assist the teachers with their implementation, if needed. I also acted as an assistant (visiting) teacher during observations, modeling the interaction strategies emphasized in the professional development, while observing the teachers' interactions and implementation of the strategies discussed. Usually, after the observation or during the observation, I gave the teachers feedback and helped them reflect on their interaction by asking questions that helped them think more deeply about what they were doing, the strategies that they used, and how they thought they could develop their interaction in the future. Some examples

would be "What interaction strategy did you use in this activity?" and "What interaction strategy would you use if you repeat this activity in the future?" Discussions after or during the observations were usually short, and the chance for real mentoring was not offered, which is why I made amendments to the original design of the initiative. While mentoring was part of the plan, I found there were only chances for quick discussions and feedback.

After each workshop, I used WhatsApp to send a summary of the key points discussed, including the videos presented. The teachers were encouraged to ask questions and share examples from their implementation in the group. However, the teachers were not always active participants in the WhatsApp discussions, with only a few conversations related to the interaction strategies taking place during the initiative. Nevertheless, during the workshops, the teachers would mention and reflect on the learning resources, particularly the videos, that were shared via WhatsApp, indicating that they benefited from these resources even if they did not actively participate in discussions.

The participant observations began in Week 2 and lasted until Week 13 of the initiative, with nine observations conducted for each of the six classes, totaling about two hours per observation. These observations focused on learning corner time and outdoor activities. In Week 13, post-initiative interviews were conducted over the phone with the nine participants, followed by a face-to-face post-initiative focus group held in Week 14 at the kindergarten. For more details about the initiative implementation, see Table 3.5.

Data Analysis

Data analysis in qualitative research is an iterative process (Yin, 2009). This is essential because, according to Robson (2011), data in their "raw form do not speak for themselves. The messages stay hidden and need careful teasing out" (p. 408). In qualitative research, data collection and analysis are not separate stages but are rather interwoven (Merriam, 1998). In this study, participant observations were analyzed daily and weekly during implementation. The preliminary analysis started with the first participant observation,

while the secondary analysis was done after finishing all participant observations, interviews, focus groups, and professional development workshops.

The findings were generated deductively and inductively through this framework using reflexive thematic analysis (Braun & Clarke, 2022), which involved a recursive engagement with the data to produce a robust analysis. I followed the six recommended phases of thematic analysis: familiarization with the data; coding; generating initial themes; developing and reviewing themes; refining, defining, and naming themes; and writing up (see Table 3.6, based on Braun & Clarke, 2022).

Lincoln and Guba (1985) described member checks as "the most crucial technique for establishing credibility" (p. 314). At all analysis stages in the study, I discussed interpretations of the findings with the teachers during the second focus group and second set of individual interviews to confirm the credibility of the data. Eight themes and various subthemes were generated from the data. For more on the themes, see Chapter 4.

Table 3.6: Summary of the Phases of Thematic Analysis

Phase	Description of the Process
1. Familiarizing yourself with your data	Reading and rereading the data in Arabic and English, becoming immersed and intimately familiar with its content, making notes on initial analytic observations and insights for each individual data item and the entire dataset.
2. Coding	Generating codes that capture and evoke important features of the data that might be relevant to the research questions. This involves coding the entire dataset, with two rounds of coding and then collating all codes and relevant data extracts together for later stages of analysis.
3. Generating initial themes	Examining the codes and collated data, developing significant broader patterns of meaning (potential themes), collating data relevant to each candidate theme, making it possible to work with the data and review the viability of each candidate theme.
4. Developing and reviewing themes	Checking candidate themes against the coded data and the entire dataset to see if they tell a convincing story of the data that addresses the research questions and further developing themes by splitting, combining, or discarding them.
5. Refining, defining, and naming themes	Developing a detailed analysis of each theme, working out the focus of each theme, determining the story of each, and deciding on an informative name for each theme.
6. Writing up / reporting	Weaving together the analytic narrative and data extracts and contextualizing the analysis in relation to existing literature.

Reliability and Validity

Reliability and validity were crucial to ensuring the trustworthiness of this study's results (Robson, 2011). Reliability is the extent to which an assessment tool obtains consistent and stable results. Merriam (1998) maintained that "the human instrument can become more reliable through training and practice" (p. 206). Thus, I conducted a pilot study to try out the professional development and all data collection methods. I sought to increase the study's dependability by following three techniques. One was reporting my position, i.e., my perceptions and experiences regarding teacher-child interaction quality, in addition to my theoretical stance, i.e., sociocultural theory (Zohrabi, 2013). Another was triangulation, a way of ensuring study validity by using more than one method to collect data (Flick, 2018). Thus, findings were obtained through a variety of qualitative methods (observation, individual interviews, and focus groups) and retrieved from different sources (teachers and the researcher). Triangulation can also represent different dimensions of a phenomenon:

> Triangulation is the process of corroborating evidence from different individuals, types of data, or methods of data collection […] This ensures that the study will be accurate because the information is not drawn from a single source, individual, or process of data collection. In this way, it encourages the researcher to develop a report that is both accurate and credible. (Creswell 2007, p. 280)

In taking researcher bias into consideration, I created an audit trail, reporting data collection and analysis in detail to give readers the chance to examine my methods and interpretations (Zohrabi, 2013).

Validity generally refers to the credibility of a study but also means the findings accurately represent the target phenomenon (Mertens, 2015). There are two main types of validity: internal and external. Internal validity is the knowledge or changes perceived during the initiative. Creswell (2007) gave suggestions to maintain internal validity in qualitative research, such as triangulating data and repeated observations. As noted above,

five classes in the pilot study were observed one day per week for five weeks. In the main study, I made nine observations of each of the six classes during the 14 weeks of the initiative. The first and last weeks did not include observations, since the children were on vacation. For clarification of researcher bias, subjectivity was minimized by collecting data from different sources through different methods.

External validity is the degree to which a study can be applied to another situation and how well results can be generalized to different contextual groups or larger groups (Gall et al., 2007). Due to the purposive sampling of this study, generalizability was not possible. However, the initiative was designed so that it could be implemented in any Saudi kindergarten. In addition, all teachers received the same professional development input and their implementation of the initiative was guided by specific requested tasks at the end of the workshops. I monitored adherence to the professional development plan and all initiative resources, data collection, and documentation. A pilot study also helped increase the validity and reliability of the data.

Ethical Protocol

An ethics form was completed in English and Arabic and submitted to the ethics committees of Dublin City University and Princess Nourah University, which both gave their approval to conduct the research (see Appendices R and S). I also got approval from the Ministry of Education in Saudi Arabia (see Appendix A). As mentioned earlier, the Ministry required a specific form for the parents (see Appendix D).

I ensured that all steps taken during the study were in accordance with the relevant ethical guidelines. Teachers were asked to sign informed consent forms after reading the plain-language statement and information sheet prior to the professional development (see Appendices C, H, G, B-2, and B-3). Participants' identities were kept anonymous. All data and materials—including teacher interviews, observation notes, photos, and video clips— were stored on the researcher's encrypted computer. Only I had access to the full dataset,

while my supervisors had access to the translated version. In accordance with ethical considerations and data protection guidelines, all data collected were handled and stored securely. As per the Record Retention Schedule and Data Protection Guidelines of Dublin City University, I will retain all data for a period of five years. This ensures compliance with data retention requirements and allows for any potential future reference or verification of findings. All electronic data will be securely stored during this period, and after five years, I will securely delete all electronic data. Furthermore, any hard copies of data will be appropriately disposed of through shredding to maintain confidentiality and privacy.

Limitations of the Study

Several limitations affected the interpretation of the findings. Only one school and nine teachers participated in the pilot and main study. As a result, the findings could not be generalized to other Saudi kindergartens. However, as this was the first study on teacher-child interaction quality implementing professional development in this context, I was not concerned with generalization but rather gathering data to understand the perspectives of the teachers, including theoretical and practical information that could inform practitioners, policymakers, and future studies. As I was working alone, the volume of data I could process was also limited.

To minimize limitations, I made every effort to maintain initiative fidelity throughout the study. First, each teacher participant received the same professional development and support. Second, teachers received the same handouts I designed, including translated articles and video links, to ensure consistency of interactions across classrooms. Third, I participated in class observations as a teacher to monitor implementation fidelity and try the interaction strategies, which was challenging and time consuming but necessary for more reliable, valid results. The limitations are further discussed in Chapter 5.

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Chapter Summary

Above, I provided a comprehensive overview of the methods employed in this study. Prior to the main study, a pilot study was conducted to refine the research approach and ensure its effectiveness. The data collected were subjected to rigorous analysis, utilizing appropriate qualitative techniques. The findings derived from this analysis have significant implications for educational policies, teacher-child interaction quality, and future research in the field.

<center>**Chapter 4: Findings and Discussion**</center>

Introduction

The findings generated to answer the research questions are presented and analyzed in this chapter. Table 4.1 summarizes the data sources and timeline.

Following the workshops, teachers were asked to implement the target strategies in their classes. I frequently visited the classes to observe and talk with the teachers about their implementation of the strategies. During the visits, I acted as a participant observer, interacting with children and implementing the target strategies as an assistant teacher.

Table 4.1: Sources of Data and Initiative Timeline

Data Source	Weeks	Time
Individual *pre-initiative* interviews	1	9 x 1 hours
Pre-initiative focus group	1	1 x 2 hours
Workshops	1–3, 6, 8, 10	6 x 2 hours
Classroom participant observation	2–13	9 observations x 6 classes x 2 hours for each observation
Individual *post-initiative* interviews	12	9 x 1 hours
Post-initiative focus group	13	1 x 2 hours

After each observation and at the end of most of the observations, when I had the opportunity, I had quick discussions with the teachers to help them reflect on their teaching and give them feedback. Usually, I asked them questions about their intentions or beliefs behind their interactions to help me write more accurate notes and to better understand their interactions and perspectives about teacher-child interaction quality.

The findings were generated deductively and inductively through sociocultural theory (Rogoff, 2003; Vygotsky, 1979) using reflexive thematic analysis (Braun & Clarke, 2022). Six themes and various subthemes were generated from the data (see Table 4.2).

Under each theme, data triangulation was adopted with data from the *pre-initiative* interviews / focus group, and participant observations, followed by data from the *post-initiative* interviews / focus group, and observations. Table 4.3 lists the anonymized participant names and classes, as described in Chapter 3. It is important to mention that any children's names given are pseudonyms as well.

Table 4.2: Themes and Subthemes

Theme	Subtheme
1. Implementation of the self-learning curriculum	
2. Play-based learning and intentionality	• Questioning • Feedback • Discussion • Problem-solving • Sustained shared thinking • Planning activities based on children's interests • Encouraging children to complete their work (perseverance and persistence)
3. Teachers' perspectives on their role in supporting children's learning and development	• Supervising (monitoring) children • Facilitating friendship • Behavior management • Supporting language development
4. Learning environment	• The impact of the learning environment • Cognitively, socially, and emotionally supportive learning environments • Characteristics of a good learning environment • Outdoor learning environment
5. Factors affecting teacher-child interaction quality	• Professional development • Working conditions • Communication and cooperation with parents • Teacher-child ratio • Administration requirements
6. Teachers' reflections on the initiative	• What teachers learned and implemented • Key takeaways

Table 4.3: Participants and Their Associated Class (Anonymized)

Teacher	Class
Nawal	Sunshine
Hessah	Rainbow
Moneerah	Colors
Layla	Flowers
Rana, Reema	Bees
Fatmah, Hanan	Birds
Maryam	No class (substitute teacher)

In this chapter, I discuss each of the six themes and their related subthemes, as outlined in Table 4.2. Extracts from the data are given throughout the chapter in Arabic and English, as the data were collected in Arabic and translated into English. I provide a reflection at the end of the chapter. By giving this reflection, I acknowledge my position as an insider researcher (Holmes, 2020), as I had a close connection or personal involvement with the subject (Merton, 1972). Self-reflection and a reflexive approach are necessary

ongoing processes for the researcher to identify their positionality. Reflexivity means researchers acknowledge themselves in their research, seeking to understand their part in it (May & Perry, 2017). Reflexivity informs positionality (Holmes, 2020). It requires explicit self-consciousness by the researcher about their views and positions and how these could have directly or indirectly influenced the findings (May & Perry, 2017).

Theme 1: Implementation of the Self-Learning Curriculum

The first theme was teachers' implementation of the self-learning curriculum before and after the initiative.

The *pre-initiative* interviews and focus group and participant observation, which involved brief discussions with teachers in Weeks 2–5, showed the influence of the self-learning approach on teachers' practices and perspectives about children's learning.

Teachers in the beginning of the initiative appeared to endorse play-based learning based on their verbal feedback and observed practices. For example, in the *pre-initiative* focus group, Rana said the following:

Play offers the best chance for children to learn and develop in interesting and happy ways. The best thing that teachers can do is offer good opportunities to learn through play. The child will think he is playing freely while he is learning.	اللعب يوفر افضل فرصة للأطفال للتعلم والنمو بطريقة ممتعة وجذابة. افضل شي ممكن تسويه المعلمة انها توفر فرص للتعلم باللعب. الطفل يعتقد انه يلعب بينما هو يتعلم.

Layla gave this response:

Children mostly do the activities by themselves; however, the teacher participates with children sometimes. She plays with them as if she were one of them and answers their questions or gives them hints if needed to keep them playing and learning.	غالبا الأطفال يسون الأنشطة بأنفسهم ؛ بس احيانا المعلمة تشارك مع الأطفال. تلعب معهم كما لو كانت وحدة منهم وتجاوب على أسئلتهم أو تعطيهم تلميحات إذا لزم الأمر عشان يكملون اللعب والتعلم.

Such responses align with how Weisberg et al. (2013) described play-based learning as a teaching approach that involves playful, child-directed elements along with some degree of adult guidance and scaffolded learning objectives.

In general, teachers' implementation of the self-learning curriculum showed that they focused on free play and did not engage in intentionality. As an example from the observations, in Week 2 while observing Nawal in the Sunshine class, I noticed that Saad was entering several corners. He did not spend more than a few minutes in each corner before going to another. For example, he entered the puzzle and manipulative games corner and took a puzzle from the shelf. He tried to solve it for a few minutes then left it on the table and went to another corner. In fact, he did not notice that the puzzle had the solution underneath it. He just picked it off the shelf without noticing there was an answer key. At the end of the corners period, I had a brief discussion with Nawal about her role and how this period helped children learn and develop. She gave this response:

In general, corner time is free-play time. The child has the freedom to choose the activity. He searches for the activity he wants to do and does it in his own way. I don't interfere except in some cases…for example, when the children ask me to play with them or give me a role, like the mother or grandmother in the dramatic play corner…the child discovers and learns through play or what we refer to as self-learning.	بصفة عامة فترة الأركان هي فترة لعب حر، الطفل عنده الحرية في اختيار النشاط، اتركه يبحث عن النشاط الي يحبه ويعمله بطريقته ولا اتدخل الا في حالات معينه...مثلا لما الأطفال ينادوني العب معهم ويعطوني دور امثله مثل الام او الجدة في ركن اللعب الايهامي... الطفل يكتشف ويتعلم بنفسه من خلال اللعب او ما نسميه التعلم الذاتي.

Nawal's response and observed practices aligned with the self-learning curriculum guide, which calls for teachers to prepare activities that children can do mostly on their own with minimum interference from the teacher (Ministry of Education, 2005). This finding was also aligned with what Bakar et al. (2015) referred to as child-initiated

activities, what Pyle and Danniels (2017) described as free-play, i.e., a pedagogical approach in which children freely chose play activities, or the "pure play" referred to by Wood (2010) as when children freely choose the activities, the teacher is the co-player, but the children largely do the negotiation and set their own goals.

Another example came from Week 4 when I observed Moneerah in the Colors class. Moneerah appeared to be monitoring the children, making sure they were all involved in the activities, and trying to solve children's problems more than interacting with them (see the section on monitoring for more details). A group of children in the blocks corner built a tall tower. They stood back, looked at their building, and smiled. After a few minutes, the tower fell. They tried to rebuild it but faced a problem making it stable. After a few minutes, they gave up and left the corner with the blocks on the floor (Moneerah was watching them from the beginning). During clean-up, the teacher called them by name to put the blocks back on the shelves. This may have been a lost opportunity to engage the children in problem-solving, mathematical concepts such as spatial awareness, language, and literacy (potentially getting a book on construction). However, according to her response in the *pre-initiative* interview, Moneerah was implementing play-based learning from her perspective:

In the corners, children love to discover. They always notice the new activities I add…they enjoy when they succeed in an activity on their own or in a small group. It's amazing how they divide the work between them and take it seriously…most of the time, I step back and give them the chance to choose and learn by themselves and from each other…I create a safe environment to learn and explore, to try and fail.	في الاركان ، يحب الأطفال الاكتشاف. يلاحظون دائمًا الأنشطة الجديدة الي أضيفها ... يستمتعون لما ينجحون في نشاط بمفردهم أو في مجموعة صغيرة. مدهش كيف يقسمون العمل بينهم ويسوونه بشكل جدي ... غالبا، أتراجع وأعطيهم الفرصة للاختيار والتعلم بأنفسهم ومن بعضهم البعض ... أقوم بإنشاء بيئة آمنة للتعلم والاستكشاف، والمحاولة و الخطا.

Nevertheless, she could have interacted more effectively by intentionally exploiting the learning opportunities presented (Bergen et al., 2020).

Another example from my observation illustrates another teacher's understanding and implementation of play-based learning. In Week 3 in the Rainbow class, Hessah spent most of the learning corners time in the art corner helping children make house-shaped artwork using colored papers and small pieces of wood. She was keen for all the children to do this activity and called them by name from the other corners to join in. Some children seemed to be rushing through the activity so they could go back to what they were doing before Hessah called them. For example, when one of the children finished his art activity and left his chair, Hessah called another child named Lama to do the same activity. Lama was in the dramatic play corner pretending to be a cook. She came immediately when the teacher called her but looked like she wanted to finish quickly and go back to the dramatic play corner:

Hessah: Lama, come over here. It's your turn to do the art activity [Lama sat in the chair.]. I want you to do a house using those colored papers and those pieces of wood. You can also color or add anything you want to decorate the house. I can help you glue the wood pieces using the glue gun. You can't use it because it's hot, okay?	حصة: لمى تعالي هنا. جا دورك تسوين العمل الفني [جلست لما على الكرسي.]. أبغاك تسوين منزل وتستخدمين هاذي الأوراق الملونة وهاذي القطع الخشبية. تقدرين تلونين أوتضيفين أي شيء تحبينه لتزيين المنزل. اقدر اساعدتك تلصقين القطع الخشبية بمسدس الغراء لأنه حار ، طيب؟
Lama: Okay.	لمى: حسنًا.
[A few minutes pass.]	(بعد بضع دقائق)
Lama: I'm done, Teacher. [Then she left quickly.]	لما: انتهيت يا معلمة. (ثم غادرت بسرعة)

About five minutes before corner period ended, Hessah reminded them that the time was about to end and that they had to put the tools away. She supervised to make sure everyone helped clean up. In a quick discussion afterward, Hessah said the following:

Today's art activity as you saw, the children cannot do without my help using the glue gun to glue the wood to the paper…in general most of the activities are prepared for the children to learn without or with minimum help from the teachers…children were busy and interested during the whole corner time as you saw.	النشاط الفني لليوم زي ماشفتي ، لا يمكن للأطفال الاستغناء عن مساعدتي باستخدام مسدس الغراء للصق الخشب بالورق ... بشكل عام ، يتم إعداد معظم الأنشطة للأطفال للتعلم بدون أو مع الحد الأدنى من المساعدة من المعلمات ... مشغولين ومندمجين الاطفال طوال وقت الاركان زي ماشفتي..

While the children were interested and busy during the entire period, I noticed some good opportunities where learning could be extended to take children to another level of learning. Even in the art activity, Hessah created a good play context and offered well-planned activities. Whilst I acknowledge the lack of professional development that Hessah received in these interaction strategies, she could have interacted more with the children to more fully benefit from play-based learning. For example, in the art activity, Hessah could have asked open-ended questions or discussed with children about the activity. All activities she prepared were close to the child-directed end of the play-based continuum, except the art activity, which was on the other (teacher-directed) end of the continuum. Therefore, Hessah could introduce more collaborative or teacher-guided activities (Weisberg et al., 2013).

Although Hessah created a good play context and offered well-planned activities, she could have interacted more with the children to more fully benefit from play-based learning.

In the sounds and movement corner, Deema and Lara were shaking opaque bottles containing different things and trying to match the sounds they heard with a picture (e.g., rice, beans, rocks, seeds):

Deema: If we mix a little bit of each bottle in one bottle, what do you think the sound will be?	ديما: إذا خلطنا شوي من كل قارورة وحطيناها بقارورة وحدة ، وش بيبكون الصوت تتوقعين؟
Lara: Nobody will figure out that we mixed everything together. [They laughed.]	لارا: محد بيعرف أننا خلطنا كل شيء مع بعض (ضحكوا)

This was a good opportunity to expand the children's understanding about sounds in an easy activity that could be done with little help from the teacher by mixing some of the contents from each bottle and discovering what sound it produced.

The examples cited above were similar to other classes, agreeing with the *pre-initiative* interviews and focus group, in which teachers said that corner time was self-learning time, similar to "child-directed play" as explained by Pyle and Danniels (2017). During that time, the children chose the activities and did them individually or in small groups, mostly with minimum interference from the teacher. Any interference from the teacher was largely at the children's request, so the play was still directed by the children. However, teachers sometimes initiated interaction to solve a problem or ensure the children's safety.

However, these examples illustrate how preparing the classroom for play-based learning might result in lost opportunities for learning. Although studies have shown the benefits of child-directed pretend play on the socioemotional development (e.g., Ashiabi, 2007; Berk & Meyers, 2013; Bodrova, et al., 2013), teacher-directed play is beneficial for the children's academic skills development (Tsao, 2008). As mentioned earlier, children benefit from all forms of play across the play-based continuum, however, guided play

activities lead to the most significant learning and developmental outcomes for children (Pyle & Danniels, 2017).

The workshops highlighted finding a balance between child-guided and teacher-guided play that would offer the chance for high-quality interaction. The data from the end of the initiative (*post-initiative* interviews and focus group as well as the observations) revealed how ideas discussed in the workshops influenced teachers' understanding and practice of play-based learning. Teachers in the *post-initiative* interviews and focus group said their understanding of the self-learning curriculum had changed, as exemplified by Layla and other teachers in the *post-initiative* focus group:

My understanding changed somewhat. I think sometimes we misunderstand the self-learning principle. Now I believe more that I am the model for the children, and they learn a lot from me when I participate in their play, as much as they learn when they are playing and exploring alone.	تغير فهمي إلى حد ما. أعتقد أننا أحيانًا نسيء فهم مبدأ التعلم الذاتي. أنا الآن أؤمن أكثر أنني قدوة للأطفال ، وهم يتعلمون مني كثير لما أشاركهم في لعبهم ، بقدر ما يتعلمون لما يلعبون ويستكشفون لحالهم.

Nawal added this:

I believe now more that my interaction with the child is essential for his learning and development, and it is the foundation of early childhood education quality. Teachers have to explain to the children about the activities and play with them, especially some new activities. Some activities, as a teacher, you cannot just put it in the learning corners and let children explore them without giving them some instruction.	أعتقد الآن أكثر أن تفاعلي مع الطفل ضروري لتعلمه ونموه ، وهو أساس جودة التعليم في مرحلة الطفولة المبكرة.لازم المعلمات يشرحون للأطفال عن الأنشطة ويلعبون معهم، وخاصة الأنشطة الجديدة. بعض الأنشطة ، ما يمكن انك تضعينها في الاركان وتتركين الأطفال يستكشفونها بدون ماتعطينهم بعض التعليمات.

Rana gave this reply:

As teachers, we have seen some children exploring the activities by themselves and knowing how to do them, but some children cannot do the activity without the teacher's help or instruction. Children's background and level of learning and abilities determine how much they need help and an explanation of a specific activity.

كمعلمات ، نشوف بعض الأطفال يستكشفون الأنشطة بأنفسهم ويعرفون كيف يسوونها ، لكن بعض الأطفال مايقدرون يسوون النشاط بدون مساعدة المعلمة أو تعليماتها. تحدد خلفية الأطفال ومستوى التعلم والقدرات مدى حاجتهم إلى المساعدة اوشرح نشاط معين.

Layla gave an example of this issue:

Once I brought a puzzle to the class and put it in the manipulative learning corner without explaining anything to the children. The children did not know how to solve it because they did not see the key for the solution. Every child tried a little bit and got bored and left it. When I indicated to them that there was a key to the solution, they solved it. Some of them enjoyed it a lot and solved it more than once.

مرة جبت بزل وحطيتها بركن الاكتشاف بدون ما شرح شيء للأطفال. ما عرفو كيف يحلونها لأنهم لم ماشافو مفتاح الحل. كل طفل حاول شوي ومل وتركها. لما وضحت لهم أن فيه مفتاحً للحل ، حلوها. انبسطو مره وبعضهم عادها كم مرة أكثر من مرة.

Moneerah ended the conversation about the self-learning principle with this thought:

I think the principle of self-learning has been overemphasized…Before this initiative, sometimes when I add an activity to the corners and the children need help or when they ask a lot of questions about the activity, I blame myself and feel that the activity is not successful because it did not keep them engaged and self-reliant. Now I think the opposite. When the activity leads

أعتقد أن مبدأ التعلم الذاتي قد تم التأكيد عليه بشكل مبالغ فيه ... قبل هذه المبادرة ، أحيانًا لما أضيف نشاطً إلى الاركان ويحتاج الأطفال مساعدة أو لما يسالون اسئلة كثيرة عن النشاط ، ألوم نفسي وأحس ان النشاط مو ناجح لأنهم ماكانو مستمتعيم ومعتمدين على انفسهم، الآن أعتقد العكس. لما يؤدي

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to discussion or ongoing joint reflection, that is a
successful activity.

النشاط إلى مناقشة أو تفكير مشترك
مستمر، فهذا نشاط ناجح.

Summary of Theme 1

Teachers' responses showed they had developed their understanding of play-based
learning. This development in their understanding was aligned with what was discussed
during the workshops based on the literature (e.g., Melhuish et al., 2015; Soliday et al.,
2019) and sociocultural theory principles, such as the ZPD (Vygotsky, 1979), scaffolding
(Wood et al., 1976), and learning through guided participation (Rogoff et al., 1984).

In general, teachers' responses in the *pre-initiative* interviews reflected a
conceptualization of play as an activity that teachers should not interfere with, in which the
teacher's responsibility is "to support, not to disturb" (Pramling Samuelsson & Johansson,
2006, p. 48) and to avoid contriving or "hijacking" the play (Goouch, 2008, p. 95).
Therefore, teachers' perspectives and practices appeared to oppose the idea of guided play
(Pyle & Bigelow, 2014). After the initiative, however, this perspective shifted, with them
describing play as an opportunity for children to explore and understand academic
concepts, in which teacher involvement is a chance to expand and encourage learning (Pyle
& Bigelow, 2014; Weisberg et al., 2013). These reported changes in perspective were
reflected in some teachers' practices as well, as demonstrated in the following examples
from my observations. In Week 11 in the Rainbow class, Hessah entered several learning
corners. She usually preferred sitting in the art corner. I saw her read a story to two
children in the library corner, interact with children in the dramatic play corner, and
encourage a girl in the blocks corner to make her tower taller.

In Week 12 in the Birds class, Hanan and Fatmah were taking turns in the science
corner. They had the black paper and soap experiment and were eager to help each child
until they did the experiment successfully and asked them some open questions about the
experiment. In this example, teachers showed their interest in participating actively in

children's learning, aligning with Pyle and Bigelow (2014), by scaffolding the children's learning using open questions (Anghileri, 2006; Madsen & Gudmundsdottir, 2000).

The findings of this theme addressed Research Questions 1 and 2 through the teachers' perspectives about teacher-child interaction quality before and after the initiative. It also addressed Research Question 3 regarding changes in their practices.

Theme 2: Play-Based Learning and Intentionality

This theme includes a discussion of the strategies teachers used to interact with children. The five strategies focused on during the workshops were generated as subthemes. Other subthemes were, planning activities based on children's interests, and encouraging children to complete their work (perseverance and persistence). In each subtheme, I discuss teachers' perspectives and practices regarding these strategies before and after the initiative, highlighting any differences.

As mentioned under Theme 1, by the end of the initiative, teachers showed a change in their definition of play-based learning, from focusing on free play or child-directed play to including guided play, in which teachers play an active role by using more interaction strategies with children. This interaction is what is called intentional teaching in the literature. Intentional teaching considers the role of adult engagement in children's play (Epstein, 2007) and can be defined as "modelling and demonstrating, open questioning, speculating, explaining, engaging in shared thinking and problem solving to extend children's thinking and learning" (DEEWR, 2009, p. 5). It should be noted that intentionality and play-based learning have recently been combined as play-based learning and intentionality (AGDE, 2022; Leggett, 2023), which is reflected in this theme.

The findings relevant to this theme emerged mainly from the *post-initiative* interviews and focus group and the observations in the last few weeks of the initiative (Weeks 10–13). For example, in the *post-initiative* focus group, Reema's response aligned with Epstein (2007) and DEEWR (2009):

High-quality interaction is always purposeful. The	يكون التفاعل عالي الجودة دائمًا هادف.
teacher interacts with the child with a goal in her	تتتفاعل المعلمة مع الطفل وفي هدف في
mind, such as teaching him a concept through a	ذهنها ، مثل تعلمه مفهوم من خلال
scientific experiment or teaching him something he	تجربة علمية أو تعلمه شيئ يحتاجه ،
needs, for example, how to tie his shoes, how to	مثلا ، كيفية يربط جزمته ، وكيف
make friends…	يكوين صداقات ...

The *post-initiative* interviews showed a similar change in perspective about intentional teaching that aligned with Epstein (2007) and DEEWR (2009), as illustrated by Rana:

When the child faces difficulty in doing or	لما يواجه الطفل صعوبة انه يسوي نشاط او
continuing an activity, I try to ask him some	انه يكمله ، أحاول أساله بعض الأسئلة أو
questions or give him feedback to help him.	أعطيه ملاحظات تساعده. نحاول أن
We try to think together how to do it. Finally,	نفكرسوى في كيفية القيام النشاط. أخيرًا ، إذا
if he can't, I show him how to do it.	لم يستطع ، أوريه كيف يسويه.

Examples of teachers implementing intentional teaching are presented within the following subthemes.

Questioning

Some teachers in the *pre-initiative* interviews and focus group mentioned questioning as one of the strategies they used to interact with children. For example, Maryam mentioned it clearly in the *pre-initiative* focus group:

| …interaction strategies…questions, I mean | ...استراتيجيات التفاعل... الأسئلة، قصدي |
| asking children questions. | اسال الأطفال أسئلة. |

In the *pre-initiative* interviews, Hessah and Reema gave similar responses about asking questions to engage children in dialogue. For example, Hessah said the following:

I try to ask shy children questions to	أحاول اسال الأطفال الخجولين أسئلة حتى
encourage them to talk and engage with me	اشجعهم يتكلمون ويتحاورون معي او مع
or other children in dialogue.	اصحابهم.

Reema mentioned questioning as one of the main strategies she used to interact with children in her class.

I use many strategies to interact with children such as questions that provoke thinking…

أستخدم العديد من الاستراتيجيات للتفاعل مع الأطفال مثل الأسئلة التي تثير التفكير ...

Hessah mentioned in her *pre-initiative* interview that questions were one of the main and most effective strategies she used to interact with children in her class:

I think there are several strategies that are effective, it depends on the activity, for example, asking questions

اعتقد في عدة استراتيجيات فعالة، يعتمد على النشاط، مثلا اسال أسئلة

Moneerah was the only teacher who mentioned open-ended questions in the *pre-initiative* interview:

The most important thing before doing an activity or a scientific experiment is…preparing open-ended questions that provoke children's thinking.

اهم شيء قبل عما أي نشاط او تجربة علمية...تجهيز أسئلة مفتوحة تثير التفكير لدى الطفل.

In the *pre-initiative* interviews and focus group, five teachers mentioned questioning as one of the main interaction strategies, aligning with the literature (e.g., Gourlay et al., 2020; MacNaughton & Williams, 2008). However, I noted that all teachers used questioning as an interaction strategy but relied on closed-ended more than open-ended questions. I witnessed an example of this in an observation in Week 2 of Layla in the Flowers class. The children took a tour of the kindergarten building. This activity was related to the study of buildings. The children went on a tour with their teacher and visited each class and room in the building. They were carrying notebooks and pencils to write down their notes. When they came back to class, the teacher, Layla, asked them to sit in a circle…she asked several questions, most of them closed-ended questions, such as the following:

- What rooms did we see?

- ما الغرف التي رأيناها؟

- What is the name of the room that we take the material and toys from?	- ما اسم الغرفة التي نأخذ منها المواد والالعاب؟
- What classes did we see?	- ما هي اسماء الفصول التي رأيناها؟
- How many classes did we see?	- كم عدد الفصول التي رأيناها؟

During corners time, I saw Layla in the art corner looking interested at the children's drawings (all of them were about the trip). One of the children showed her his drawing, and she asked him the following questions:

- What did you draw?	- ماذا رسمت؟
- What is this? [pointing to a specific element in the child's drawing]	- ما هذا؟ (تشير الى عنصر محدد في الرسمة)
- What colors did you use?	- ما هي الألوان التي استخدمتها؟

After observing Layla for a full day, I noticed that she used questioning as an interaction strategy. She relied much more on closed-ended questions but did ask mainly open-ended questions when a behavioral problem happened between two children. They arrived in the same corner at the same time and there was only one space left, so they were fighting over who would put his card in the empty place and enter the corner:

Teacher Layla: Who came first?	المعلمة ليلى: من جاء أول؟
Mohammad: Me.	محمد: أنا.
Faisal: No, me.	فيصل: لا أنا.
Teacher Layla: Each one of you said he came first, and I didn't see who came first. How do you think we can solve this problem?	المعلمة ليلى: قال كل واحد منكم أنه جاء أول وانا ما شفت من جاء أول. كيف ممكن نحل هاذي المشكلة؟
Mohammad: I go in the corner first for a short time, then Faisal goes in.	محمد: ادخل الركن أول شوي ، وبعدين يدخل فيصل.
Teacher Layla: Do you agree, Faisal?	المعلمة ليلى: توافق يا فيصل؟
Faisal: No.	فيصل: لا.

Teacher Layla: What do you think we can do, Faisal?

المعلمة ليلى:طيب وش رايك يا فيصل؟

A similar observation occurred in Week 3 in the art corner in the Sunshine class. Ziyad showed his drawing to the teacher, Maryam, who asked him some questions about it:

Teacher Maryam: What did you draw?

المعلمة مريم: ماذا رسمت؟

Ziyad: Our house.

زياد: بيتنا

Teacher Maryam: Can you describe it to me?

المعلمة مريم: تقدر توصفه لي؟

Ziyad: We live in an apartment, on the fifth floor.

زياد: نعيش بشقة بالدور الخامس

Teacher Maryam: What colors did you use?

المعلمة مريم: ايش الألوان الي استخدمتها؟

Ziyad: Black, yellow, blue for the sky.

زياد: أسود ، أصفر ، أزرق للسماء.

Teacher Maryam: Do you want to talk about your drawing in the last meeting time?

المعلمة مريم: ودك تتكلم عن رسمتك في اللقاء الاخير؟

Ziyad: No, I want to put it in my bag. I want to take it home.

زياد: لا، ابي احطها بشنطتي أبي آخذها للبيت.

These examples are similar to what I noticed in all classes. Teachers used questioning as a strategy throughout the day to interact with children and relied mostly on closed-ended questions, except when trying to resolve conflicts.

Teachers commonly rely on closed-ended questions, even in high-quality early childhood education (Siraj-Blatchford & Manni, 2008). In contrast to the *pre-initiative* interviews and focus group, all teachers in the *post-initiative* interviews mentioned questioning as a main strategy they used to interact with children and emphasized using open-ended questions. This showed that teachers had become more aware of the importance of open-ended questions mentioned in the workshop, in keeping with the literature (e.g., Gourlay et al., 2020; MacNaughton & Williams, 2008; Parker & Hurry, 2007). Even teachers who had not mentioned questioning as an interaction strategy before

described it as a major interaction strategy after the initiative, as exemplified by Layla's response:

Every day during circle time, I make sure to ask open-ended questions…I try to ask more open-ended question in the corners too.	كل يوم خلال وقت الحلقة ، أتأكد من طرح أسئلة مفتوحة ... أحاول اسال اكثر أسئلة مفتوحة في الاركان بعد.

Similarly, Hanan gave this response:

I've started paying attention to my questioning style and I'm trying to ask more open-ended questions. However, I found that asking good open-ended questions is very hard and requires more practice and preparation.	بديت الاحظ أسلوبي بالاسئلة وأحاول اسال الأسئلة المفتوحة اكثر. بس لقيت ان الأسئلة المفتوحة الجيدة صعبة وتحتاج ممارسة وتحضير اكثر.

Hanan's response aligns with several studies, such as Gourlay et al. (2020), Dengler (2009), and Parker and Hurry (2007), which claimed that asking questions that prompt learning is a skill that takes time to hone. Nawal even wanted to make the question of the day an open-ended question (the question of the day was a mandatory yes/no question for all classes in the kindergarten):

According to what I learned in the workshops, I would like to make the question of the day an open-ended question, but the kindergarten administration would ask me to stick to the same specific question for all classes in the kindergarten.	حسب ما تعلمته في ورش العمل ، ودي اخلي سؤال اليوم سؤال مفتوح، لكن إدارة الروضة تطلب مني التمسك بنفس السؤال المحدد لجميع الفصول في الروضة.

Fatmah gave this response:

Effective and main strategies…questioning strategy…stimulating children's curiosity with open-ended questions and extend children's learning.	الاستراتيجيات الفعالة والرئيسية ... استراتيجية الأسئلة ... تحفيز فضول الأطفال بأسئلة مفتوحة توسيع نطاق تعلم الأطفال.

Moneerah added that teachers should not only ask questions but should let children ask questions as well:

I encourage children to discuss and ask questions. When a child asks a question, he is excited to know the answer.	أنا أشجع الأطفال على المناقشة وطرح الأسئلة. عندما يسأل الطفل سؤال ، فإنه متحمس لمعرفة الإجابة.

What Moneerah said was mentioned during one of the workshops, i.e., that children's questions are important and how to answer them and benefit from them in extending children's learning. Using children's questions and interests to extend learning has been mentioned in several studies, such as Baram-Tsabari (2006), Olsson (2013), and Murray (2022).

Similarly, in the *post-initiative* focus group, teachers emphasized using questioning as a main interaction strategy, as noted by Hanan:

Open-ended questions are an effective strategy in general and in big classes in particular.	الأسئلة المفتوحة هي إستراتيجية فعالة بشكل عام ومع الاعداد الكبيرة بشكل خاص.

Maryam gave this response:

However, asking open-ended questions is not easy and teachers need to prepare them before the activity. The open-ended questions paper that you gave us helped sometimes.	ومع انه طرح أسئلة مفتوحة مو سهل ويحتاج المعلمات إلى تحضيرها قبل النشاط. ورقة الأسئلة المفتوحة التي قدمتها لنا تساعدنا أحيانًا.

She was referring to a paper I gave each teacher with examples of open-ended questions. I asked them to put it in an obvious place to remind them to ask this type of question. Nawal added the following:

In the blocks corner, it [the paper mentioned above] is especially helpful.	في ركن المكعبات ، [الورقة المذكورة أعلاه] خصوصا مفيدة الورقة.

The observation notes showed that some teachers tried to ask more open-ended questions and use other techniques, such as asking one short question at a time and giving children time to think and respond (cf. Dengler, 2009; MacNaughton & Williams, 2008). Below is an example from my observation in Week 11 of Maryam in the Sunshine class in the blocks corner:

Teacher Maryam: How did you build this tower so high?	المعلمة مريم: كيف بنيت هذا البرج بهذا الارتفاع؟
Renad: I put those [pointing at the big blocks] in the bottom, then I put these [smaller blocks] on top.	ريناد: حطيت هاذي [التي تشير إلى المكعبات الكبيرة] تحت ، بعدين حطيت هاذي [المكعبات الصغيرة] فوق.
Teacher Maryam: Why did you put the blocks this way?	المعلمة مريم: لماذا وضعتي المكعبات هكذا؟
Renad: So it can be high.	ريناد: عشان يصير البناء عالي.
Teacher Maryam: What will happen if we put those big blocks down and those small ones up?	المعلمة مريم: ماذا سيحدث لو وضعنا هذه المكعبات الكبيرة اعلى الصغيرة اسفل؟
Renad: I think it will fall.	ريناد: اتوقع تطيح.

The following is another example from an observation in Week 10 of Moneerah in the Colors class. I noticed that Moneerah tried to ask more open-ended questions that day, but she still used closed-ended questions in situations where she could use open-ended questions. When I asked her at the end of the day about whether she thought she used more open- or closed-ended questions, she said the following:

I think I'm more aware of my questions now and I think I'm using open questions half the time…I know I need to use them more, but I'm trying.	أعتقد أنني أكثر وعيًا بأسئلتي الآن وأعتقد أنني أستخدم الأسئلة المفتوحة نص الوقت ... أعرف أني بحاجة إلى استخدامها أكثر ، لكنني أحاول.

For example, in the art corner, she was still asking questions like these:

- What colors did you use?	‎-ما هي الألوان التي استخدمتها؟
- What is this shape?	ما هذا الشكل؟
- Can you write your name on it or do you want me to write it?	هل يمكنك كتابة اسمك عليها أم تريدني أن أكتبه؟

However, in the science corner, she asked more open questions about the fish tank that she added to the corner:

| - Why can the fish live underwater? | لماذا يمكن للأسماك أن تعيش تحت الماء؟ |
| - Why can't we live in the water? | لماذا لا نعيش في الماء؟ |

In addition, I observed that other teachers were trying to ask more open questions, asking one short question at a time, and giving children time to think and respond. In general, teachers showed after the initiative that they considered questioning a powerful interaction strategy to promote children's learning and development, showed how open questions were important, and tried to use them as much as possible, aligning with the literature (e.g., Gourlay et al., 2020; Parker & Hurry, 2007; Siraj-Blatchford & Manni, 2008).

Feedback

Teachers did not explicitly mention feedback as an interaction strategy in the *pre-initiative* interviews or focus group. Only Hanan mentioned it indirectly in the *pre-initiative* interview by saying that she gave clues to children about how to continue an activity when they ran into trouble:

| I give children hints when they face difficulty in completing the activity…try to put this here or start from here, not here. | أعطي تلميحات للأطفال عندما يواجهون صعوبة في إكمال النشاط ... حاول تحط هذا هنا أو ابدء من هنا ، مو هنا. |

However, during my observations, I noticed that all teachers used feedback to interact with children. For example, in a Week 3 observation of Reema and Rana in the

Bees class, Majed drew a rocket ship and showed it to Reema, prompting her to say the following:

Wow, I like your drawing so much.   واو، عجبتني رسمك مرة.

Rana was close by and heard Reema:

It looks like the rocket we saw in the video   شكله زي الصاروخ الي شفناه امس في
yesterday. Great job, Majed.   الفيديو. عمل رائع ماجد.

In another observation in Week 2 of Nawal in the Sunshine class, Yasser was building in the blocks corner and Tamym joined him, causing some of the blocks on top to fall:

Yasser: You ruined it.   ياسر: خربتها.

Tamym: Sorry, sorry, I'm so sorry, I'll fix it.   تميم: آسف ، آسف ، أنا آسف مرة،
                                                               بأصلحها.

The teacher, Nawal, saw and heard what happened, and when Tamym finished fixing his friend's building, she came by and said the following:

I like your attitude. You apologized to your friend   يعجبني تصرفك. اعتذرت لصديقك
and fixed his building. Thank you, Tamym.   وصلحت مبناه. شكرا تميم.

Hanan's example included effective ways to give children feedback. However, the observation notes from the first two weeks of the initiative, before I introduced feedback as an interaction strategy, showed that teachers used verbal feedback mainly to appreciate effort or promote positive behavior. I did not see during those two weeks feedback that gave children clear, specific information about their work that helped them think for further learning (Dunlap et al., 2007; MacNaughton & Williams, 2008). I also did not notice teachers using nonverbal feedback during those two weeks, in keeping with some studies that verbal feedback can be more effective and appropriate in early education (Dunlap et al., 2007; Pushparatnam et al., 2021).

In the *post-initiative* interviews, six teachers mentioned feedback in different contexts, showing they considered it an important interaction strategy that supported children's learning (Pushparatnam et al., 2021). For example, Maryam mentioned feedback as one of her main strategies to interact with children:

I use the strategies that we discussed in the workshops…feedback…to support and encourage children to learn.	أستخدم الاستراتيجيات التي ناقشناها في ورش العمل ... التغذية الراجعة ... لدعم وتشجيع الأطفال على التعلم.

Moneerah noted the value and challenge of giving effective feedback:

I realized the importance of proper feedback…it is what keeps the child completing his work. Without proper feedback, the child can get bored and leave his work…I realized that it is not easy to give children feedback…I used to give children feedback…but now I focus more on quality or effective feedback. Before I used to give the children feedback when they ask. Now I try to find the best time to give them feedback even if they didn't ask to help them complete or expand their learning.	عرفت أهمية التغذية الراجعة..هي الي تخلي الطفل يكمل عمله. بدون التغذية الراجعة الطفل ممكن يمل ويترك عمله.. اكتشفت انه مو سهل إعطاء الأطفال تغذية راجعة.. كنت اعطي الأطفال تغذية راجعة بس اللحين اركز على النوعية الفعالة... اول كنت اعطيهم تغذية راجعة لما يسالون اللحين أحاول القى افضل وقت حتى لو ماطلبو مساعدة انهم يكملون او يطورون تعلمهم.

Her response aligned with Shin et al.'s (2007) assertion that feedback could be seen as a simple strategy, but it is important for teachers to pay attention to their feedback style and their strengths and weaknesses in applying this strategy intentionally.

Similarly, in the *post-initiative* interviews and focus group, teachers pointed out other characteristics about effective feedback that had been discussed in the workshops, such as giving feedback as soon as possible and describing a child's work rather than

judging it (Dunlap et al., 2007; Pushparatnam et al., 2021). This was exemplified in the *post-initiative* focus group by Maryam:

Be specific in feedback and give clear feedback when children face any difficulty.	التغذية الراجعة تكون محددة وواضحة لما الأطفال يواجهون صعوبة.

Rana added the following:

The feedback needs to be clear to help the child stay interested and keep doing the activity.	التغذية الراجعة تحتاج نكون واضحة عشان نساعد الأطفال يبقون متحمسين ويكملون النشاط.

Fatmah gave another response:

Feedback should be right away because children forget what they have done, and you should stay away from words like "great" and "good job" as much as you can…describing what the child did is better…let him know what good things he did.	التغذية الراجعة لازم تكون مباشرة لان الأطفال ينسون وش سوو، لازم نبعد عن كلمات مثل احسنت ورائع قد مانقدر.. وصف ما فعله الطفل افضل.. اخليه يعرف الأشياء الجيدة الي سواها.

I observed teachers try to implement effective feedback in their classes more often. As an example, during my observation in Week 12 of Moneerah in the Colors class, Jana was playing in the sand area in the playground using the sand toys and was trying to build a castle but failed because the sand was not wet enough:

Teacher Moneerah: I saw you trying hard to build a castle…what makes the sand stick together?	معلمة منيرة: شفتك تحاولين بجد تبنين قلعة.. ايش يخلي الرمل يلصق ببعض؟
Jana: Water.	جنى: الماء.
Teacher Moneerah: I will bring some water for you…	معلمة منيرة: بجيب لك موية.

After Jana mixed the sand with water, she made a castle but she mixed the sand with too much water; when she flipped the castle, it did not stay up, and she looked upset:

Teacher Moneerah: I think you put in too much water. I think if you add some sand it will make it like a dough, not very wet, not very dry. Try it.

معلمة منيرة: اعتقد حطيتي مرة كثير موية. اعتقد لوحطيتي شوية رمل بيخليه زي العجينة، مو مره ناشف ومو مرة مبلول. جربيه.

After a few minutes, this exchange occurred:

Jana: Yaaay! I made a castle.

جنى: ياااااي! سويت قلعة.

Teacher Moneerah: That is a big, strong castle. You worked hard to make it. Good job, Jana.

معلمة منيرة: قلعة كبيرة وقوية. عملتي بجد. احسنتي جنى.

In a short conversation after this interaction, I asked Moneerah what strategies she used. She mentioned feedback as one of them. Moneerah's feedback gave Jana the sense that the teacher was interested in her accomplishments and was responsive to her attempts to learn, agreeing with Shin et al. (2007).

Moreover, by the end of the initiative, I noticed that some teachers were using verbal feedback more often to support children's development in mathematics, science, and language (including literacy). This approach may be related to the change in teachers' perspective that play-based learning could involve intentional teaching using different strategies, including feedback as a major interaction strategy. The activity corners where I noticed teachers were using more feedback included science, literacy (writing), dramatic play, and manipulative toys. This was aligned with prior findings that children's mathematics and reading skills could be supported by feedback, with immediate feedback being more effective (e.g., Howard et al., 2018; Rimm-Kaufman et al., 2007). Feedback as an appropriate interaction strategy to support children's learning in corners was discussed during the workshops based on several studies showing the importance of feedback to science, mathematics, and literacy (e.g., Pushparatnam et al., 2021; Shin et al., 2007). Below is an example from my observation in Week 12 of Reema in the Bees class. Reema added an activity about counting in the writing corner called "count and write." Nouf was

trying to count the plastic circle pieces the teacher provided in a small box. She dumped

them on the table and started to count them but looked confused and kept starting over:

Teacher Reema: Why don't you line them up then count them from the beginning of the line.	معلمة ريما: ليش ما تصفينهم وتعدينهم من بداية الصف.
Nouf: Okay.	نوف: طيب.
After a few seconds, she said in a loud happy voice, "14!"	بعد ثواني، قالت بصوت مرتفع وسعيد "١٤".
Teacher Reema: Yes, right, now write the number on the little board.	معلمة ريما: صح عليك، اللحين اكتبي الرقم على السبورة.
Nouf wrote 41 instead.	كتبت نوف ٤١
Teacher Reema: I think this number is much bigger than 14, can you try to write it again…	معلمة ريما: اعتقد ان هذا الرقم اكبر بكثير من ١٤، حاولي تكتبينه مرة ثانية.
Nouf looked confused. Then the teacher told her, "This is 41…if you switch 1 and 4, what number will it be?	بدت نوف محتارة، ثم قالت لها المعلمة "هذا ٤١.. واذا بدلتي بين٤ و ١ أي رقم بيكون؟
Nouf: 14.	نوف: ١٤.
Teacher Reema: Yes, now what if we take one circle, how many circles are left?	معلمة ريما: نعم، لو اخذنا دائرة وحدة كم دائرة بتبقى؟
Nouf [after counting]: 13.	نوف: (بعد ما عدتهم) ١٣.
Teacher Reema: Can you write it?	معلمة ريما: تقدرين تكتبينه.
This time Nouf wrote 13 correctly on the first try.	كتب نوف ١٣ هذه المرة صحيحة من اول مرة.

 Another example of feedback came from the same observation in Week 12 of Rana

in the Bees class. I saw Bader in the library pretending to read a story to the teacher, Rana.

He was flipping the papers and trying to describe what he saw in weak Arabic mixed with

English. Bader was born and lived in the UK before and had just arrived in Saudi Arabia.

Rana was repeating some of what he said in full Arabic sentences, pointing to objects in the story and saying their names in Arabic:

Bader: The boy, mother, the baby, all of them go to the sea.	بدر: الولد ، الأم ، الطفل ، كلهم يذهبون إلى البحر.
Teacher Rana: You mean the whole family went to the beach.	المعلمة رنا: تقصد أن جميع أفراد الأسرة ذهبوا إلى الشاطئ.
Bader: Yes.	بدر: نعم.
Teacher Rana: Then what happened? I see some toys on the sand [she was pointing to the toys and sand].	المعلمة رنا: ثم ماذا حدث؟ أرى بعض الألعاب على الرمال [كانت تشير إلى الألعاب والرمل].

Overall, teachers did not highlight feedback as an interaction strategy in the *pre-initiative* focus group or interviews, although according to the observation, they did use feedback to give general support. In contrast, the *post-initiative* interviews, focus group, and later observation notes showed they were more aware of the importance and characteristics of feedback as an interaction strategy that can support children's learning and developments. In addition, teachers express that they use feedback intentionally as an interaction strategy, and they become more self-aware of their feedback style, as well as their strengths and weaknesses in applying this strategy. This has been mentioned in studies such as Howard et al. (2018) and Shin et al. (2007).

Discussion

Discussion is one of the main interaction strategies in early childhood education and care (NAEYC, 2022); however, only four teachers mentioned it as an interaction strategy in the *pre-initiative* interviews, as in Rana's response:

Interaction mostly happens in group discussions about a topic, a trip, or any problem in class or any general problem.	يحدث التفاعل غالبًا في مناقشات المجموعة حول موضوع أو رحلة أو أي مشكلة في الفصل أو أي مشكلة عامة.

In the *pre-initiative* focus group, Maryam likewise mentioned discussion as an interaction strategy:

Group discussion, discuss an event or something we did together, like a trip.	مناقشة جماعية ، مناقشة حدث أو شيء قمنا به معًا ، مثل رحلة.

Teachers in the *pre-initiative* interviews and focus group echoed a few important points found in the literature. For example, Rana's response aligned with the NAEYC (2022) standards and assessment guide, which recommend offering opportunities for children to have discussions with teachers or peers about solving interpersonal problems or problems related to the physical world. This also aligned with focus on activities that involve discussion and reflection (OECD, 2012, 2014).

The observations showed that all teachers were using discussion in their classes. However, in the first few weeks of the initiative, discussions between teachers and children usually occurred during circle time or the last meeting and were aimed at solving behavioral problems during corner time and on the playground. The few conversations during corner time that could support children's learning were short and could have been extended. Below is an example from my observation in Week 3 of Nawal in the Sunshine class. In the science corner, Tala was looking at insects preserved in glass. Tala saw the teacher Nawal come by:

Tala: Teacher.	تالا: معلمة
Teacher Nawal: Yes?	المعلمة نوال: نعم؟
Tala: What is this insect's name?	تالا: ما اسم هذه الحشرة؟
Teacher Nawal: Wasp.	المعلمة نوال: دبور.
Tala: I saw one in the playground.	تالا: شفت وحدة في الملعب.
Teacher Nawal: I don't think you saw it. I think you saw a bee. I see bees sometimes in the playground.	المعلمة نوال: ماعتقد انك شفتي دبور اعتقد شفتي نحلة أحيانا أرى نحل في الملعب.

Then Nawal went to another corner. Based on my reading (e.g. Siraj-Blatchford & Sylva, 2004) about teacher-child interaction quality and my experience, that was a wasted learning opportunity to discuss what Tala saw, why the teacher thought she saw a bee, and the differences between a bee and a wasp. The discussion could have led to further learning and extending activities, such as reading a book about insects or searching the Internet about the differences between a bee and a wasp. The conversation might have been short because the teacher saw play-based learning as child-directed play with minimum interference from the teacher, was focusing more on monitoring children, as discussed later, or thought her comment was enough and was not thinking about extending the child's learning at that moment. In contrast, Howard et al. (2018) stated that in a high-quality early childhood classroom, teachers engage in discussions that involve positive, targeted verbal feedback and clarify misunderstandings.

On the other hand, teachers in the *post-initiative* interviews and focus group mentioned discussion several times with more explanations and details. For example, when I asked the group about the key factors of high-quality teacher-child interaction, Fatmah mentioned discussion as a suitable interaction strategy:

Discussion as a group to solve a problem. Children sometimes come up with very creative ideas when we discuss a problem as a group.	المناقشة كمجموعة لحل مشكلة. أحيانًا يفكرون الأطفال أفكار إبداعية مرة لما نناقش مشكلة كمجموعة.

Nawal agreed that discussion was especially useful in larger classes:

Discussion is effective with big classes to plan activities or even evaluate activities that we did. Sometimes in the last meeting time, we discuss what we did during the day, what activities children like the most.	تكون المناقشة فعالة مع الفصول الكبيرة لتخطيط الأنشطة أو تقييم الأنشطة التي قمنا بها. في بعض الأحيان في وقت اللقاء الأخير، نناقش الي سويناه خلال اليوم وايش حبو من الأنشطة.

Maryam added the following:

| Discussion can be a very successful interaction strategy if the teacher knows how to choose interesting topics and manage the discussion, or it will be a mess. The teacher needs skills and experience. | يمكن أن تكون المناقشة استراتيجية تفاعل ناجحة إذا كانت المعلمة تعرف كيفية اختيار موضوعات مثيرة للاهتمام وإدارة المناقشة، أو ستكون فوضى. تحتاج المعلمة إلى المهارات والخبرة. |

Moneerah gave this response:

| Through discussion, children learn how to take turns and listen to others…now I feel more comfortable making discussions longer…they like to share their ideas. | ومن خلال المناقشة، يتعلم الأطفال تبادل الأدوار والاستماع إلى الآخرين... والآن أشعر براحة أكبر في إجراء المناقشات لفترة أطول... فهم يحبون مشاركة أفكارهم. |

All teachers in the *post-initiative* interviews mentioned using discussion as an interaction strategy, giving points similar to the ones they gave in the focus group. For example, some said they were trying to extend their discussions with children, as exemplified by Reema:

| I am trying to ask more open-ended questions and make the discussions longer so that all the children participate and share their opinions and each child feels that his opinion is important. | أحاول طرح المزيد من الأسئلة المفتوحة وجعل المناقشات أطول حتى يشارك جميع الأطفال ويتبادلوا آرائهم ويشعر كل طفل أن رأيه مهم. |

The *post-initiative* focus group and interview responses aligned with the literature on discussion. For example, class discussions can teach children respect for others, improve communication skills, and show how to interact with peers and adults, goals set by the Illinois Early Learning Project (n.d.). Furthermore, Fatmah's claim that children come up with creative ideas when they discuss a problem aligned with Sylvia (2009), who stated that group discussion could produce a high level of cognitive conflict, stimulating children's thinking.

Observations from the last few weeks of the initiative showed that teachers were trying to have longer conversations and benefit from some of the ideas presented in the workshop, such as having discussions after a book or story that a teacher would lead with a group of preschoolers. Such experiences provide opportunities to develop children's thinking capacity (Kook, 2023). An example of this was from my observation in Week 10 of Hanan in the Birds class. Hanan read a story in the library corner to a small group of children. After reading the story, she had a discussion with them:

English	Arabic
Teacher Hanan: What else could the lion do to escape the net?	المعلمة حنان: ماذا يمكن أن يفعل الأسد أيضاً للهروب من الشبكة؟
Nada: He could use his claws. The lion has really sharp claws.	ندا: ممكن يستخدم مخالبه. الأسد عنده مخالب مرة قوية.
Ibrahim: His teeth are sharp too. I saw a lion in the zoo. He was really big and his teeth were big. He could bite the net and run.	إبراهيم: أسنانه قوية بعد. شفت أسد في حديقة الحيوانات. كان كبيرًا مرة و أسنانه كبيرة. يمكن يعض الشبكة ويركض.

At the end of the day, I had a quick conversation with Hanan about whether she had noticed any differences in her teaching. She said the following:

English	Arabic
I am trying to have discussions and stimulate children's thinking…I found the library corner good for having discussions after reading a book or a story.	أحاول إجراء مناقشات وتحفيز تفكير الأطفال... ركن المكتبة مناسب للمناقشات بعد قراءة كتاب أو قصة.

Another idea presented in the workshop is that discussion can be used to help children plan, evaluate, or reflect on their activities, in accordance with the OECD (2012, 2014). Some teachers tried to implement this idea more often, especially during corner time. Below is an example from my observation in Week 11 of Layla in the Flowers class. In the beginning of corner time, I saw Layla gather the children in a circle and discuss what

they planned to do that day and encourage them to evaluate and extend some of the work they had done the day before:

Teacher Layla: Khaled, I saw that your artwork is dry [he made a clay cup yesterday]. How was the clay?	المعلمة ليلى: خالد، شفت عملك الفني جاف [صنع كوبًا من الطين بالأمس]. كيف كان الطين؟
Khaled: It was a little hard to do, it was dry.	خالد: كان ا صعب شوي، وكان ناشف.
Teacher Layla: Yeah, clay is harder than Play-Doh, but you did a good job forming the clay into a cup. What would you like to add to your cup?	المعلمة ليلى: صح، الطين أصعب من الصلصال، لكنك قمت بعمل جيد في تشكيل الطين على شكل كوب. ماذا تريد أن تضيف إلى كوبك؟
Khaled: Maybe draw some shapes on it.	خالد: ربما أرسم عليها بعض الأشكال.

A good discussion involves meaningful questions and positive feedback (Kook, 2023). In general, discussion as a strategy was mentioned briefly by four teachers in the *pre-initiative* interviews and by one in the *pre-initiative* focus group. In the *post-initiative* focus group and interviews, however, all teachers considered it a major interaction strategy and mentioned important points about using this strategy to interact with children. The observations also showed that teachers tried to make their discussions longer and when appropriate expanded children's learning, as recommended by the literature (e.g., Howard et al., 2018; Sylvia, 2009).

Problem-Solving

Problem-solving is an interaction strategy closely related to questioning, feedback, and discussion. It is recognized as one of the main interaction strategies in early childhood education (NAEYC, 2022; OECD, 2012) and was mentioned by two teachers in the *pre-initiative* interviews, such as Nawal:

If the children are playing and a problem occurs	إذا كان الأطفال يلعبون وحدثت مشكلة
between the children, I intervene and make them	بين الأطفال أتدخل وأجعلهم يحلون
solve the problem through dialogue.	المشكلة عن طريق الحوار.

She also said this in response to another question during the *pre-initiative* focus group:

Sometimes I ask the children some questions	أحيانًا أطرح على الأطفال بعض الأسئلة
about the activities and experiences they do,	حول الأنشطة والتجارب ، خاصة إذا
especially if they encounter a problem. I try	واجهوا مشكلة. أحاول من خلال الأسئلة
through the questions to make them discover	أن أجعلهم يكتشفون الحل بأنفسهم.
the solution themselves.	

Only Layla mentioned problem-solving in the *pre-initiative* interviews clearly as a strategy to solve conflicts among children:

When a conflict happens between children, I	عندما تحدث مشكلة بين الأطفال، أستمع
listen to them and encourage them to solve the	إليهم وأشجعهم على حل المشكلة من خلال
problem through discussion, for example,	المناقشة، على سبيل المثال، تبادل الأدوار
taking turns on swings.	على المراجيح.

I noted in my observation during the first few weeks of the initiative that teachers used problem-solving mainly in situations where there was conflict between children. For example, in a Week 2 observation of Maryam in the Sunshine class, I saw Hatem and Salman struggling with the colors box. They were standing near the art comer's shelves, and both were trying to take the same color box:

Maryam: What's going on?	مريم: وش صاير؟
Hatem: I took the box first.	حاتم: أخذت العلبة أول
Salman: No, I took it first.	سلمان: لا، أنا أخذتها أول.
Maryam: Can you remind me about our rules for using tools in the class?	مريم: تذكروني يقوانين استخدام الأدوات في الفصل؟
No one answered.	لا أحد أجاب.

Maryam: In our class, we share the tools. Tell me how you're going to share the colors?	مريم: في فصلنا، نتشارك الأدوات. كيف نتشاركون الألوان؟
Hatem: I'll use them first, then Salman.	حاتم: بأستخدمهم أول، بعدين سلمان.
Salman: But I want to color now.	سلمان: انا ابي الون اللحين.
Maryam: What about you using them at the same time?	مريم: وش رايك تستخدمونها بنفس الوقت؟
Salman: I give Hatem some of them?	سلمان : أعطي حاتم بعضها ؟
Maryam: Or you can both sit at the art table next to each other and put the colors box between you. You can sit here, Salman, and you can sit here, Hatem, and you put the colors box between you. What do you think?	مريم: أو يمكنك تجلسون على طاولة الفن جنب بعض وتحطون علبة الألوان بينكم. اجلس هنا سلمان، وتقدرتجلس هنا يا حاتم، وتضع بينكم علبة الألوان. وش رايك؟
Salman: Fine.	سلمان : طيب .
Hatem didn't say anything.	ولم يقل حاتم شيئا.

This example concurred with MacNaughton and Williams (2008) that interpersonal and social problem-solving is used more widely with children who struggle to build peaceable relationships with peers, and it is important for teachers to remember that social as well as academic learning can grow through learning how to solve problems (see also Gross, 2005).

Through the first few weeks, I did not notice teachers using problem-solving as an interaction strategy to support children's learning. However, children during this initiative had just started going back to school after the COVID-19 pandemic, so the classroom rules were new to them.

In contrast, problem-solving as a main interaction strategy was mentioned by four teachers in the *post-initiative* focus group with more details, such as Maryam's response:

The problem-solving strategy works well also for large numbers of children. We sit in a circle and look for solutions together and the children all benefit from the discussion.

استراتيجية حل المشكلات كويسة مع الأعداد الكبيرة. نجلس في حلقة ونبحث عن الحلول مع بعض ويستفيد كل الأطفال من المناقشة.

Hanan added the following:

When I help a child solve a problem during an activity, sometimes I ask him to talk about it to the class, so all children benefit and know what to do if they face the same problem.

لما أساعد طفل على حل مشكلة أثناء النشاط أحيانًا أطلب منه أن يتحدث عنها أمام الفصل، حتى يستفيد جميع الأطفال ويعرفون كيف يتصرفون إذا واجهوا نفس المشكلة.

Moneerah gave this response:

It's also a skill for life. We need to teach children how to solve their own problems, especially in our big classes. Sometimes we don't have the time to solve all the children's problem […] we need to teach children how to solve their own problems.

هي مهارة للحياة بعد. نحن بحاجة لتعليم الأطفال كيفية حل مشاكلهم وخاصة مع الاعداد الكبيرة. في بعض الأحيان لا يكون لدينا الوقت لحل جميع مشاكل الأطفال […] علينا أن نعلم الأطفال كيفية حل مشاكلهم بأنفسهم.

Hessah gave this response:

Unfortunately, that's what mostly happens. I think you heard how much children call us: "teacher… someone hit me...teacher…I can't do this, come and help me…" They depend on us to solve most of their problems.

وللأسف، هذا الي يصير دايم. أعتقد أنك سمعت كم من الأطفال ينادوننا: "معلمة... حد ضربني... معلمة... ماقدر اسوي هذا، تعال وساعدني..." إيعتمدون علينا في حل معظم مشاكلهم.

Maryam, Hanan, and Moneerah showed an understanding of some ideas discussed during the workshops and suggested them as solutions for larger classes. This aligned with previous findings (e.g., Gross, 2005; MacNaughton & Williams, 2008) that problem-solving is a foundational skill in all walks of life. On the other hand, Hessah noted that it

was still hard to implement a problem-solving approach and complained about children depending on teachers to solve their problems. This gap between what teachers learned and did is discussed later in the chapter.

Reema in the *post-initiative* interview gave examples from an article (Mesrobian, 2021) that I asked the teachers to read prior to the problem-solving workshop and we discussed as a group during the workshop:

Problem-solving…daily problems…especially in the beginning of the year…children's curiosity, sometimes they come and ask about universal problems they saw on TV, for example, like what we read and discussed in the workshop…you gave us an example of the ship that got stuck in the Suez Canal that some teachers used as a problem-solving activity.	حل المشكلات.. المشاكل اليومية.. خاصة في بداية العام.. فضول الأطفال أحياناً يجون يسألون عن مشاكل عالمية شافوها بالتلفزيون مثلاً مثل ما قرأناه وناقشناه في الورشة.. أعطيتنا مثال على السفينة الي علقت في قناة السويس والتي استخدمها بعض المعلمين كنشاط لحل المشكلات.

I noted in my observation during the last few weeks of the initiative that some teachers were using problem-solving as an interaction strategy in certain situations. For example, in a Week 10 observation of Moneerah in the Colors class, Moneerah was discussing with children the problem of closing the sand area. Some children were upset because they had not played in the sand area for a long time, as it was closed for maintenance.

Saad: We haven't gone there for a long time.	سعد: من زمان ما رحنا هناك.
Moneerah: It's closed for maintenance.	منيرة: مغلق للصيانة.
Rawan: Why are they taking so long?	روان: ليش طول ؟
Moneerah: That is a problem. What can we do?	منيرة : هاذي مشكلة، وش نقدر نسوي؟
Fahad: Tell the principal we want to play there, and then she will open it for us.	فهد: قولي للمديرة نبغي نلعب هناك وتفتحه لنا.

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Moneerah: Do you think it will be safe to play there?

Rawan: No, I saw the floor around it is broken, we could fall.

Moneerah: So, all of you really want to play in the sand area, but it's closed. What can you do? Children suggested several things that would not be doable, and the teacher let them evaluate each suggestion. Finally, the teacher gave them a hint, saying, "Where else can we play with sand?"

Rawan: In our class?

Moneerah: How?

Rawan: Just bring some sand and water?

Fahad: Like the sand table in the Bees class. I saw it there.

Moneerah: That's doable. I will ask the principal if she can offer a sand table for us, but there will be a problem. The sand can go everywhere in the class. The Bees class put it outdoors. We don't have access to the outdoors in our class…

Another problem appeared and the teacher discussed it with them until they found a solution together.

Moneerah: How can we make sure that the sand will not go everywhere in the class?

منيرة: تعتقدون أنه من الآمن اللعب هناك؟

روان: لا، شفت الأرض حولها مكسورة، ويمكن نطيح

منيرة: طيب، كلكم تبون تلعبون بملعب الرمل بس مسكر. وش نقدر نسوي؟ اقترح الأطفال عدة أشياء لا يمكن تنفيذها، وسمحت لهم المعلمة بتقييم كل اقتراح. أخيرًا، أعطتهم المعلمة تلميحًا قائلة: "أين يمكننا اللعب بالرمل؟"

روان: في فصلنا؟

منيرة: كيف؟

روان: فقط جيبي الرمل والماء؟

فهد: مثل طاولة الرمل في النحل، شفتها هناك.

منيرة: هذا ممكن. سأطلب من المديرة توفر لنا طاولة رمل، ولكن ستكون هناك مشكلة. يمكن للرمال أن يروح كل مكان في الفصل. فصل النحل حاطينه برا واحنا مانقدر.

وظهرت مشكلة أخرى فناقشها المعلمة معهم حتى وجدوا حلاً معًا.

منيرة: كيف يمكننا التأكد من أن الرمل ما يوسخ الفصل؟

Fahad: We play gently, we don't throw the sand outside the table.	فهد: نلعب بلطف، ولا نرمي الرمل برا الطاولة.
Nada: We clean around the table with the broom.	ندا: ننظف حول الطاولة بالمكنسة.
Moneerah: Yes, that's right. As I told you, I will ask the principal to give us a sand table.	منيرة: نعم هذا صحيح، بأطلب من المديرة تجيب لنا طاولة رمل.

What Moneerah did concurred with Recep's (2018) assertion that teachers can facilitate problem-solving by valuing children's problems and solutions, focusing on children's answers, and encouraging them by creating a positive climate to try their own solutions or in this example share their solutions. Also, teachers can promote a better climate for problem-solving by encouraging children to listen and understand other perspectives, identify problems, and find different solutions (Kook, 2023; NAEYC, 2022).

Another example of teachers implementing problem-solving with materials and giving children the chance to test their solution appeared in a Week 8 observation of Fatmah in the Birds class. Fatmah made dough with some children. The dough was too sticky and she had a discussion with the children about how to make it less sticky so it would not adhere to their hands during play. Some of them added salt, some flour. She let them keep trying until the dough was good enough to play with. The children looked interested in the activity, and she mentioned to me later that she purposely wanted the children to try for themselves to make the dough usable.

This aligns with MacNaughton and Williams (2008) and Recep's (2018) claim that teachers should prepare a safe, appropriate space to experiment with solutions, especially when children are working together. Also, Fatmah let them take time to think about how to solve the problem and test their solutions in practice, with trial and error an important part of learning (cf. Recep, 2018).

In summary, although problem-solving is one of the main interaction strategies in early childhood education (NAEYC, 2022; OECD, 2012), only two teachers mentioned it

before the initiative. In the first few weeks, teachers used problem-solving mainly to resolve conflict between children. Teachers showed different perceptions of problem-solving after the initiative and tried to implement it more often, mainly by intentionally benefiting from everyday situations (Mesrobian, 2021).

Sustained Shared Thinking

During the sustained shared thinking workshop, the teachers said this was a new strategy for them. Interestingly, eight mentioned in the *post-initiative* interview that they were trying to use it as an interaction strategy in their classes. For example, Nawal said the following:

Sustained shared thinking is one of the strategies that I tried to implement in my class, but I think I need more practice…extending children's thinking.	التفكير المشترك المستدام هو إحدى الاستراتيجيات الي حاولت اطبقها في فصلي، ولكن أعتقد أني احتاج ممارسة اكثر... توسع نطاق تفكير الأطفال.

Another example came from Reema's *post-initiative* interview:

Sustained shared thinking…when I want to use this strategy, I remember the phrase you said, "keeping the ball in the air," and I try to keep it as much as I can.	التفكير المشترك المستدام...لما ابغى استخدام هذه الإستراتيجية، أتذكر العبارة التي قلتيها، "إبقاء الكرة في الهواء"، وأحاول اخليها قد ما اقدر.

Reema mentioned an idea from Touhill (2012a), which the teachers read before the sustained shared thinking workshop, and I discussed it with them. Touhill (2012a) compared dialogue to tossing a ball from one speaker to another, with a richer dialogue metaphorically seen as keeping the ball in the air longer, such as through open-ended questions. Layla called sustained shared thinking an important strategy that teaches children how to work together:

Children think together and learn how to share ideas and be part of team. They think	يفكر الأطفال معًا ويتعلمون كيفية مشاركة الأفكار ويكونوا جزء من الفريق. يفكرون

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deeply and come up sometimes with great	بعمق ويخرجون أحيانًا بأفكار عظيمة. وبهذه
ideas. That's how they become successful	الطريقة يصبحون أعضاء ناجحين في العمل
members in teamwork in the future.	الجماعي في المستقبل.

This aligned with Touhill's (2012a) claim that when children have opportunities to investigate and solve problems with each other and supportive adults, their thinking and learning become deeper, richer, and more complex. Fatmah gave a similar response:

Sustained shared thinking, especially when I take a	التفكير المشترك المستمر، خاصة
role in the dramatic play corner, when I take a role	عندما ألعب دور في ركن اللعب
in their play, they don't look at me as the teacher	الدرامي، لما ألعب معهم، لا ينظرون
and I know all the answers. They think together	إليّ كمعلمة وأنا أعرف كل الإجابات.
and sometimes I'm impressed with how deep their	يفكرون مع بعض وأحيانًا اتعجب من
conversations become. Children are very smart.	عمق محادثاتهم. الأطفال أذكياء جدًا.

This response aligned with Waibel's (2021) finding that play offers opportunities for sustained shared thinking. Similarly, according to Touhill (2012a), such thinking is encouraged by adults being engaged as collaborators in learning instead of being the source of definitive solutions. This makes the learning process a more enriching experience for everyone involved. Moneerah gave another interesting comment:

After this initiative, I discovered that most of	بعد هذه المبادرة، اكتشفت أن معظم
our interactions are not deep enough…using	تفاعلاتنا ليست عميقة بما فيه الكفاية...
sustained shared thinking strategy…I tried to	باستخدام استراتيجية التفكير المشترك
get involved [with the children] in deeper	المستمر... حاولت المشاركة [مع الأطفال]
conversations and ask open-ended question	في محادثات أعمق وطرح أسئلة مفتوحة
that create opportunities for learning…	تخلق فرصًا للتعلم...

This aligned with Touhill's (2012a) observation that adults often have only "superficial" verbal interactions with a child, such as giving orders or greetings. Limiting adult-child

interactions in that way creates few avenues to engage more deeply with how children think and learn.

Hanan noted the sustained shared thinking activity "how to draw a mirror" (see Touhill, 2012a), discussed in Workshop X, which she found interesting. She wanted to implement the strategy:

The "how to draw a mirror" activity that we discussed was an interesting example I was planning to do, but I didn't find time for it. I will keep it in mind for next semester…	كان نشاط "كيفية رسم مرآة" الي ناقشناه مثال حلو كنت أخطط اسويه، لكن مالقيت الوقت. بحاول الفصل الدراسي القادم ...

Maryam gave this response:

I try to give the children the chance to think and speak more than me, and it is even better if I guide the children to discuss and think with each other.	أحاول أن أمنح الأطفال فرصة للتفكير والتحدث أكثر مني، ومن الأفضل أن أرشد الأطفال إلى المناقشة والتفكير مع بعضهم البعض.

This followed Waibel's (2021) recommendation that teachers and young students should collaborate as "equal partners" to "generate and expand a thinking process together" (p. 60).

Similar responses from teachers in the *post-initiative* focus group mentioned sustained shared thinking as a good strategy to solve the problems of larger classes, as Layla noted:

Sustained shared thinking is also a suitable strategy for large groups. Children like to share their ideas and add or build on each other's ideas.	التفكير المشترك المستدام أيضًا استراتيجية مناسبة للمجموعات الكبيرة. يحب الأطفال مشاركة أفكارهم وإضافة أفكار بعضهم البعض أو البناء عليها.

Hanan responded to this statement:

But it's not easy to involve children in deep discussion, especially in the beginning of the year...sustained shared thinking I think is a very effective strategy but needs good preparation, open-ended questions, and practice.

مو سهل إشراك الأطفال في نقاش عميق، خاصة في بداية العام... أعتقد أن التفكير المشترك المستدام هو استراتيجية فعالة ولكن تحتاج إلى إعداد جيد وأسئلة مفتوحة وممارسة.

I also observed examples of teacher involvement in sustained shared thinking activities. In a Week 11 observation of Maryam in the Sunshine class, Maryam gave each child a notebook and pencil. Then she read a story about a little hungry bear who wanted to reach a beehive to get honey. She asked the children to draw the solution and then had a discussion with them about the solutions. All children shared their ideas and showed their drawings:

Nada: I drew a lot of sticks that the bear could stack on each other to reach the beehive, and he has a long spoon to get the honey too.

Waleed: I drew a ladder so the bear can go up quickly to get the honey when the bees go to get honey.

ندى: رسمت كثير من الأعواد التي يمكن للدب أن يضعها فوق بعض ليصل إلى خلية النحل، ومعه ملعقة طويلة ليحصل على العسل أيضًا.

وليد: رسمت سلم حتى يقدر الدب يطلع بسرعة يأخذ العسل لما يروح النحل يجيب العسل.

Maryam set aside time to implement sustained shared thinking after reading the story, ask open-ended questions, and give children time to consider, draw, and discuss their ideas. She also chose an interesting activity that captured their attention, consistent with Waibel (2021), Touhill (2012a), and Brodle (2014). Another example was in a Week 11 observation of Moneerah in the Colors class. Moneerah played with a child in the puzzle and manipulative toys corner. She added magnetic shapes that could be used to build different shapes, such as a car, house, or flower. She was playing with Jasser as a co-player when Jasser suggested building a house and Moneerah agreed:

Moneerah: How big should the house be?

منيرة: كيف لازم يكون حجم المنزل؟

Jasser: I think this big [shows how big with his hands].	جاسر: ممكن قد كذا [يمثل حجمه للمعلمة بيديه].
Moneerah: How are we going to make the roof?	منيرة: كيف بنسوي السقف؟
Jasser: Hold this piece and I will put this piece…we forgot the door…	جاسر: أمسكي هذي القطعة وأنا بحط هذي القطعة. نسينا الباب...
The house fell down.	سقط المنزل.
Moneerah: What should we do now?	منيرة: ماذا نفعل الآن؟
Jasser: I think we should make it smaller so it will be strong. Hold this piece. I will put the walls…	جاسر: يمكن نخليها أصغر حتى تكون قوية. امسكي هذي القطعة. بحط الجدران...
Moneerah: And let's try those bigger pieces.	منيرة: خلنا نجرب هاذي القطع الأكبر.
Jasser: Okay.	جاسر: طيب.

In a short discussion about this interaction, Moneerah said, "I was trying to interact and extend Jasser's learning." Although she was using sustained shared thinking, she referred to it as interaction. I believe the teachers were still unfamiliar with the strategy's name in Arabic but understand the core idea. This example also shows how play can offer an opportunity for both teacher and child to be involved in sustained shared thinking, as noted by Waibel (2021).

In summary, sustained shared thinking was a new strategy teachers learned about from the initiative. They mentioned it afterward as an interaction strategy and showed interest in implementing it. While some called it important, they said it was not easy to implement and required good preparation. My observations captured examples of them trying to use it in practice. In some cases, teachers planned guided play activities (Pyle & Danniels, 2017), mainly based on this interaction strategy.

Planning Activities Based on Children's Interests

This subtheme emerged from the *post-initiative* interviews and focus group as well as observations during the last few weeks of the initiative (Weeks 10–13). The idea of planning activities based on children's interests to extend their learning was introduced through discussions with teachers during the workshops (particularly the one on sustained shared thinking), watching videos of high-quality early education from around the world, and reading articles about interaction strategies before the workshops. For example, in the *post-initiative* interview, Rana gave this response:

Sometimes children come up with creative ideas and they want to implement them, and I think with them too about how we can implement the ideas. I found that planning activities with children based on their ideas or questions are much more fun and really support their learning in ways that are interesting and important to them.	في بعض الأحيان يأتي الأطفال بأفكار إبداعية ويريدون تنفيذها، وأفكر معهم أيضًا في كيفية تنفيذ الأفكار. لقد وجدت أن التخطيط للأنشطة مع الأطفال بناءً على أفكارهم أو أسئلتهم هو أكثر متعة ويدعم تعلمهم بطرق مثيرة للاهتمام ومهمة بالنسبة لهم.

In the *post-initiative* interview, Fatmah described high-quality education as follows:

The topics of the activities are interesting and based on the children's interests, suggestions, and questions. When the children choose what they want to learn, they benefit more, they learn more.	موضوعات الأنشطة ممتعة وتعتمد على اهتمامات الأطفال واقتراحاتهم وأسئلتهم. عندما يختار الأطفال ما يريدون تعلمه، فإنهم يستفيدون أكثر، ويتعلمون أكثر.

Other studies have likewise claimed that planning activities based on children's interests were related to high-quality education (e.g., Copple & Bredekamp, 2009; Hedges et al., 2011). Fatmah also emphasized giving children the chance to choose topics they wanted to study and plan activities based on their interests and questions. Furthermore, Rana and Fatmah's statements about asking questions and how to benefit from them in extending

children's learning supported similar claims in other studies, such as Baram-Tsabari (2006), Olsson (2013), and Murray (2022).

In the *post-initiative* focus group, the teachers again highlighted the importance of extending children's learning by planning activities based on their interests. Moneerah, for example, had this to say:

I try to plan the activities with the children. We evaluate some activities together and decide what we want to do next, if we want to repeat the activity or if we want to add something.	أحاول التخطيط للأنشطة مع الأطفال. نقوم بتقييم بعض الأنشطة معًا ونقرر ما نريد القيام به بعد ذلك، إذا أردنا تكرار النشاط أو إذا أردنا إضافة شيء ما.

Layla added the following:

Children love when you ask them about their opinions…what we can add to this corner? What would you like to do to explore something or to learn more about it? This gives them a sense of belonging, especially when they add something to the environment, like plants.	الأطفال يحبون عندما تسألهم عن آرائهم...ماذا يمكننا أن نضيف إلى هذا الركن؟ ما الذي تريد القيام به لاستكشاف شيء ما أو معرفة المزيد عنه؟ وهذا يمنحهم شعورًا بالانتماء، خاصة عندما يضيفون شيئًا إلى البيئة، مثل النباتات.

According to these responses, the teachers felt that planning activities based on children's interests was more likely to create a learning environment responsive to their needs and interests. This can promote a sense of belonging and engagement among children, which is essential for their overall development and well-being (NAEYC, 2020).

On the other hand, some teachers mentioned challenges such as time constraints, curriculum requirements, differing interests among children, limited time, and a large class size as impediments to this approach (see Theme 5). Moneerah countered with this opinion:

Although you can plan some activities, for example, adding a book to the library and	على الرغم من أنه يمكنك التخطيط لبعض الأنشطة، على سبيل المثال إضافة كتاب إلى

reading it with a small group of children in the library corner or watching a video with children about an animal the children are interested in learning about, planning a trip with children, adding some materials to some corners and so on.	المكتبة وقراءته مع مجموعة صغيرة من الأطفال في زاوية المكتبة أو مشاهدة فيديو مع الأطفال عن حيوان يهتم الأطفال بالتعرف عليه، التخطيط لرحلة مع الأطفال، وإضافة بعض المواد إلى بعض الاركان، وهكذا.

This discussion revealed that all teachers agreed with the importance of extending children's learning and planning activities based on children's interests; however, they also discussed challenges in this regard, in keeping with Birbili (2019). Hessah and Rana's responses agreed with Lewis et al.'s (2019) finding that it was challenging to teach intentionally in a child-centered program based on children's interests.

During the observations, some teachers tried to extend children's learning and plan activities based on their interests. For example, in Week 11 in the Colors class, Moneerah had a discussion with Mohammed and Nasser, who were arguing about the real size of dinosaurs:

Mohammed: The dinosaur is taller than this building.	محمد: الديناصور أطول من هذا المبنى.
Nasser: No, it's taller than Kingdom Tower [a famous skyscraper in Riyadh].	ناصر: لا، إنه أطول من برج المملكة (ناطحة سحاب شهيرة في الرياض).
Mohammed: Impossible. How he can eat?	محمد: مستحيل. كيف يمكن يأكل؟
Nasser: I'm sure.	ناصر: أنا متأكد.
Moneerah: I have a book about dinosaurs. I'll add it tomorrow to the library and we'll see how tall the dinosaur is.	منيرة: عندي كتاب عن الديناصورات. بحطه بكرة في المكتبة وسنرى كم طول الديناصور.
Mohammed: I saw a video on YouTube that shows the dinosaur is as tall as our school.	محمد: شفت مقطع فيديو على يوتيوب شفت أن الديناصور طوله طول مدرستنا.

Moneerah: That's a good idea too. If we have time in the final meeting, I'll try to find a video about dinosaurs on my break, and if we have time in the final meeting today or tomorrow, we can see it all together, but I'll add the dinosaur book to the library tomorrow anyway.

منيرة: وهذه فكرة جيدة أيضًا، بأحوال اشوف فيديو عن الديناصورات في استراحتي، وإذا كان عندنا وقت في اللقاء الأخير اليوم أو بكرة، فيمكننا رؤيته مع بعض، لكنني سأضيف كتاب الديناصورات إلى المكتبة بكرة.

In a brief conversation with Moneerah after corners time, she said the following:

I think Mohammed will remind me first thing tomorrow morning about the book. He is so exited…children love to plan something with the teacher and wait for it excitedly.

أعتقد أن محمد سيذكرني بالكتاب أول شيء بكرة الصباح. مرة مبسوط... يحب الأطفال يخططون لشيء مع معلمتهم وينتظرونه بحماس.

Moneerah's example aligned with Seitz (2006) about the importance of using children's interests as a foundation for planning in early childhood education. Children are more engaged and motivated to learn when teachers incorporate their interests into the curriculum. To identify these interests, Seitz suggested observing children play. This information can then be used to plan activities and experiences that build on children's interests, such as books.

Another example occurred in Week 11 in the Birds class with Hanan and Fatmah. In a discussion with them at the end of the day, they mentioned that they planned an activity with children based on a conversation during the last meeting about camping:

Hanan: Last week I had a conversation with the children about camping, and we ended up planning to camp in the backyard. Fatmah and I planned the activity with the children.

حنان: في الأسبوع الماضي، تكلمنا مع الأطفال عن التخييم، واخر شي خططنا للتخييم في الساحة الخلفية. خططنا أنا وفاطمة لهذا النشاط مع الأطفال.

Fatmah: Children suggested bringing tents, small tents that can be found in the toy stores, food, toys, blankets…

فاطمة: اقترح الأطفال إحضار الخيام، الخيام الصغيرة التي يمكن العثور عليها في محلات الألعاب، الطعام، الألعاب، البطانيات...

Hanan: It was so much fun and the children liked the activity so much. We did this activity two years ago with another class, but […] this time we benefited from the children's conversation, and based on that, we asked them to plan what to bring and what activities they wanted to do while camping. They suggested playing UNO, for example.

حنان: لقد كان ا ممتع مرة والأطفال حبو النشاط مرة. قد سوينا هذا النشاط قبل سنتين مع فصل آخر، ولكن [...] هذه المرة استفدنا من محادثة الأطفال، وبناءً على ذلك، طلبنا منهم التخطيط لما يجب إحضاره وما هي الأنشطة التي يريدون القيام بها أثناء التخييم. اقترحوا لعب اونو، على سبيل المثال.

Only a few similar examples were seen during the observations of the teachers. Although activities in the kindergarten were generally planned by the administration, the teachers tried to find time to respond to children's interests and plan activities accordingly. The teachers generally showed themselves to be aware of the benefits of planning activities based on children's interests, in agreement with the literature (e.g., Birbili, 2019; Copple & Bredekamp, 2009; NAEYC, 2020; Seitz, 2006).

Encouraging Children to Complete Their Work (Perseverance and Persistence)

Although not a main focus of the initiative and only discussed as a side point in the workshops, encouraging children to have perseverance and persistence emerged as a subtheme (see Leonard & Garcia, 2020; McClelland et al., 2011), mainly from the *post-initiative* interviews and focus group. However, only a few examples of this theme were found in the observations.

Teachers in the *post-initiative* focus group agreed that encouraging children to complete their work was one of the main takeaways of the initiative, as noted by Maryam:

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Encourage the child to complete his work, encourage him to persevere and persist. Before, I didn't care about the idea of completing the work. Personally, I applied it to my son. I started to encourage him that if he started doing something, he had to complete it, that it would help him even in the future so that he would be committed to his work.	تشجيع الطفل على إكمال عمله، وتشجيعه على المثابرة والإصرار. في السابق، لم أكن أهتم بفكرة إكمال العمل. أنا شخصياً طبقته على ابني. بدأت أشجعه على أنه إذا بدأ في فعل شيء ما، لازم يكمله، وهذا بيساعده حتى في المستقبل حتى يكون ملتزم بعمله.

Moneerah gave a similar answer:

I've started noticing that some children have a tendency not to complete their work, and I'm trying to encourage them to complete their work. I realized how important it is to train children to complete their work and to persevere and be persistent, which is very important for their future learning and work.	بدأت ألاحظ أن بعض الأطفال لديهم ميل لعدم إكمال عملهم، وأحاول تشجيعهم على إكمال عملهم. أدركت مدى أهمية تدريب الأطفال على إكمال عملهم والمثابرة والاصرار، شيئ مرة مهم لتعلمهم وعملهم في المستقبل.

Rema concurred with the others:

I agree with Moneerah. After we discussed how important it is to encourage children to complete their work, I started noticing some children who have this tendency. They start an activity, then leave it and go to another one. However, when I encourage them to complete their work or help them, give them feedback, they complete it.	وأنا أتفق مع منيرة. وبعد أن ناقشنا مدى أهمية تشجيع الأطفال على إكمال عملهم، بدأت ألاحظ بعض الأطفال الي عندهم هذا الاتجاه. يبدون نشاط ثم يتركونه ويذهبون إلى نشاط آخر. ومع ذلك، عندما أشجعهم على إكمال عملهم أو مساعدتهم، وتقديم الملاحظات لهم، فإنهم يكملونه.

These responses aligned with Leonard and Garcia (2020) and McClelland et al. (2011) regarding the importance of perseverance and persistence. Fatmah added the following observation:

English	Arabic
Sometimes children need some explanation or help to complete their work. They need to know the goal of the activity…giving the child feedback, asking him questions, telling them the right steps to do the activity.	يحتاج الأطفال أحيانًا إلى بعض الشرح أو المساعدة لإكمال عملهم. يحتاجون معرفة الهدف من النشاط... إعطاء الطفل ملاحظات، وطرح الأسئلة عليه، وإخباره بالخطوات الصحيحة للقيام بالنشاط

Layla noted the teacher's role in setting a good example in this regard:

English	Arabic
I think that when the children see that the teacher has persistence and perseverance, they will act like her.	أعتقد أنه عندما يرى الأطفال أن المعلمة تتمتع بالإصرار والمثابرة، فسوف يتصرفون مثلها.

Fatmah and Layla offered strategies for encouraging children to complete their work that aligned with some of those mentioned by Dweck (2010), such as providing clear instructions, breaking down tasks into manageable steps, providing positive feedback, and setting achievable goals. Fatmah and Layla's responses demonstrated the importance of teacher-child interaction in supporting children's learning and development, as established by the literature (e.g., Hamre, 2014; Mashburn et al., 2008). This can be done by using interaction strategies such as feedback, questions, and modeling to encourage perseverance and persistence.

In the *post-initiative* interviews, some teachers mentioned encouraging children to complete their work as a key takeaway, as exemplified by Moneerah:

English	Arabic
I encourage the children to complete the activity they started. I feel responsible for developing perseverance in each child.	أشجع الأطفال على إكمال النشاط الذي بدأوه. أشعر بالمسؤولية عن تنمية المثابرة لدى كل طفل.

However, the observations revealed few examples of them encouraging children to complete their work. For example, I saw Hanan in Week 11 encouraging Dania to finish an art activity he had started the day before:

| Dania, I checked your art project. It is already dry. You can complete your work on it today. What would you like to add? Maybe some feathers and glitter…um, I'll see. | دانيا، شيكت عملك الفني. تراه نشف. ممكن تكملين عملك عليه اليوم. ماذا تريد أن تضيفين؟ يمكن بعض الريش والقلتر... بشوف. |

On the same day, I saw Fatmah encourage Fahad to continue writing animal names from flashcards on a little board in the literacy corner:

Fatmah: What about this animal? Do you want to know how to write his name…and what about this one? I think you have it as a pet, right?	فاطمة: وماذا عن هذا الحيوان؟ هل تريد أن تعرف كيف يكتب اسمه...وماذا عن هذا الاسم؟ أعتقد أنه حيوانك ألاليف، أليس كذلك؟
Fahad: Yes, I have a cat.	فهد: نعم عندي قطة.
Fatmah: Can you write his name?	فاطمة: ممكن تكتبي اسمه؟
Fahad: Okay.	فهد : طيب .

As the above examples demonstrated, teachers showed an interest in encouraging children to complete their work, helping them develop perseverance and persistence. Although it was a secondary point in the initiative, it had an impact on the teachers' perspectives. The observations might not have shown many examples of this because they were focused on the five main interaction strategies of the initiative.

Summary of Theme 2

This initiative focused on five main strategies to give teachers an understanding of how they could improve their interactions with children through intentional instruction (see Edwards, 2017). In this way, teachers could continue following the same curriculum while being informed by recent studies showing the importance of this type of interaction in children's learning and development (e.g., Maier et al., 2020; OECD, 2021; Tonge et al., 2018). This aligned with Leggett and Ford (2013), who highlighted the need to provide a balance between adult-guided and child-led play. This "emphasis on play-based learning

and the intentional role played by both educators and children" (AGDE, 2022, p. 4) involves combining "learning through play" and "intentional teaching" to form a new practice, "play-based learning and intentionality" (p. 21).

The findings addressed Research Questions 1 and 2 through the teachers' perspectives about teacher-child interaction quality before and after the initiative. It also addressed Research Question 3 regarding changes in their practices.

Theme 3: Teachers' Views on Supporting Children's Learning and Development

Early childhood teachers play a critical role in providing high-quality care and education to young children. Early childhood programs require teachers to fulfill a variety of roles (AGDE, 2022; NAEYC, 2022). In this vein, the findings generated within Theme 3 could be divided into the following subthemes: monitoring, facilitating friendship, behavior management, and supporting language development. Preparing the learning environment was also mentioned by teachers as one of their main roles but is discussed later under the learning environment theme.

Supervising (Monitoring) Children

Teachers placed a great emphasis on monitoring children as their main role. This encompassed monitoring for safety, making sure children were engaged in learning, and interfering only when necessary. Monitoring for safety was mentioned by all teachers in the *pre-initiative* interviews, as exemplified by Layla:

Monitor the children for their safety, not only for their physical safety but also for their psychological safety.	مراقبة الأطفال حرصاً على سلامتهم، ليس فقط من أجل سلامتهم الجسدية ولكن أيضاً من أجل سلامتهم النفسية.

Early childhood organizations likewise agree that maintaining the safety of the child physically and psychologically is essential in any early education setting (AGDE, 2022; NAEYC, 2022).

Outdoor safety was also emphasized by all the teachers in the *pre-initiative* interviews; for example, Maryam said the following:

Safety is the first and most important characteristic [of high-quality interaction], especially in the playground since playing outdoors could involve accidents.	السلامة هي اهم خاصية [تقصد من خصائص الجودة] خصوصا في الملعب الخارجي لان ممكن تحدث حوادث للأطفال

Similarly, Coleman and Dyment (2013) stated that due to the features of an outdoor environment, such as climbing equipment, teachers might perceive their main role during outdoor playtime as supervising and ensuring the safety of children.

In the *pre-initiative* focus group, teachers also mentioned monitoring safety as one of their main roles, as exemplified by Nawal:

Paying attention to their safety in the playground is a priority.	يعد الاهتمام بسلامتهم في الملعب أولوية.

Layla gave a similar response:

Monitoring children while they play, making sure they don't hurt each other or say bad words to each other, and noticing if any child needs help.	مراقبة الأطفال أثناء لعبهم، والتأكد من عدم إيذاء بعضهم البعض أو التلفظ بألفاظ سيئة لبعضهم البعض، وملاحظة ما إذا كان أي طفل يحتاج إلى المساعدة.

Reminding the children about the rules of the kindergarten and encouraging them to follow those rules was another form of monitoring according to the teachers, especially on the playground. I noticed that Maryam, Fatmah, and Reema always reminded the children about the rules for playing outdoors at the beginning of the period before they started playing. As an example, from my observation in Week 5 of Maryam in the Bees class, before the children went to the bike yard, she lined them up in front of the class and reminded them of the rules, e.g., walking on the sidewalk and not in the bike path. Maryam

always started outdoor playtime by reminding the children of the rules, especially rules regarding safety and taking turns. In a short discussion, she mentioned the following:

Children get really excited while they're playing on the playground, and since they've just started coming back to school after the pandemic, I'm trying to get them used to the kindergarten rules so they don't get hurt…	يشعر الأطفال بالحماس حقًا أثناء لعبهم في الملعب، وبما أنهم بدأوا للتو في العودة إلى المدرسة بعد الوباء، أحاول تعويدهم على قواعد الروضة حتى لا يتعرضوا للأذى...

Moneerah emphasized implementing and clarifying the classroom rules in the *pre-initiative* interviews:

The rules in the classroom are clear and children abide by them. The rules are for the children's safety first, and to facilitate learning second, and simply to know what is expected and what is considered good behavior and what is considered bad behavior in kindergarten. I explain to them that each place has its own rules…street…house and we have to follow the rules.	القواعد في الفصل واضحة ويلتزم بها الأطفال. القواعد تهدف إلى سلامة الأطفال أولاً، وتسهيل التعلم ثانياً، وببساطة معرفة ما هو متوقع وما يعتبر سلوك جيد وما يعتبر سلوك سيئ في الروضة. أشرح لهم أن كل مكان له قواعده الخاصة...الشارع...المنزل وعلينا أن نتبع القواعد.

This emphasis on rules aligned with the literature that rules are essential to have a positive learning environment and to help children understand what they can expect from themselves and other children in the class (Beazidou et al., 2013; NAEYC, 2022).

Another aspect of how the teachers viewed their monitoring role was making sure children were engaged in learning. For example, in Week 4 when observing Moneerah in the Colors class, I noticed that she mostly monitored the children and made sure they had something to do. She started interacting about 15 minutes after free play in corner time started. Her interaction mainly involved solving problems children faced or directing or helping them choose an activity and keeping all children busy. For example, she noticed

that Layan was waiting her turn to enter the dramatic play corner without doing anything, so she told Layan the following:

I will write your name in the waiting list. You can play in another corner, and I'll let you know when it's your turn. I don't want you to waste your time while you wait. You can go play in another corner.	سأكتب اسمك في قائمة الإنتظار يمكنك اللعب في زاوية أخرى، وسأخبرك عندما يحين دورك. لا أريدك أن تضيع وقتك أثناء الانتظار. يمكنك الذهاب للعب في زاوية أخرى.

Teachers in all the classes I observed similarly monitored the children to make sure they were engaged in an activity during the corners period. I asked Nawal after the observation in Week 3 why she made sure all children were busy doing an activity:

All children should be busy doing something during corner time so they learn and don't bother their friends. Usually when children are not engaged in an activity, they might bother their friends who are learning.	يجب أن يكون جميع الأطفال مشغولين بعمل نشاط خلال وقت الاركان حتى يتعلمون ولا يزعجون أصدقائهم. عادة، عندما لا يشارك الأطفال في أي نشاط، قد يزعجون أصدقائهم الذين يتعلمون.

This view on how to monitor the children included interfering when necessary, as illustrated by a response from Nawal in the *pre-initiative* interview:

When the children get to know each other and get along, the teacher can just monitor them while they play and interfere when it's necessary.	لما يتعرف الاطفال على بعضهم البعض وينسجمون مع بعض تكتفي المعلمة بمراقبهم وتتدخل عندما يكون التدخل ضروري.

Teachers in the *pre-initiative* focus group gave similar responses, such as Reema:

The main role of the teacher…is to monitor the children as they play and notice if any child is facing a problem or doesn't know what to do…	الدور الرئيسي للمعلمة... هو مراقبة الأطفال أثناء لعبهم وملاحظة ما إذا كان أي طفل يواجه مشكلة أو لا يعرف ما يجب فعله...

This focus on noticing if any child needs help and making sure they are engaged in activities aligned with Coleman and Dyment (2013).

Based on the *pre-initiative* interviews and focus group, the participants viewed monitoring as an important role for them as teachers. In the *post-initiative* interviews and focus group, in contrast, teachers placed far more emphasis on interaction. On the other hand, the observations showed that teachers monitored the children for safety and to keep them engaged in learning experiences throughout the initiative, with no differences apparent in practice.

Facilitating Friendship

As explained in the previous subtheme, teachers placed a strong emphasis on monitoring children during play and intervening or interrupting only when necessary. However, they also stated that another role for them as teachers was to prepare the environment for children to play with each and form friendships, as explained by Nawal in the *pre-initiative* focus group:

I believe the teacher's role is to play with children sometimes, especially at the beginning of the year because the children are new to each other. Later, when the children get to know each other and get along, the teacher can just monitor them while they play and interfere when it's necessary and prepare the activities and the environment very well, so the children can learn and play with each other with less interference from the teacher.	اعتقد بان دور المعلمة ان تلعب معاهم احيانا خصوصا بدايه العام لان الأطفال جديدين على بعض ، ثم اذا تعرف الاطفال على بعضهم البعض وانسجموا مع بعض تكتفي بمراقبهم وتجهيز الانشطه والبيئه بشكل جيد بحيث يتعلم الأطفال ويلعبون مع بعض باقل تدخل من المعلمة.

Others gave similar responses in the *pre-initiative* focus group, including Reema:

The main role of the teacher is to prepare the activities and to watch the children as they play.	دور المعلمة الاساسي اعداد الانشطة ومراقبة الاطفال وهم يلعبون.

Rana followed up with this comment:

أحيانا تلعب معهم... تتدخل اذا واجه الأطفال	Sometimes she plays with them…intervenes
أي صعوبة، او اذا يحتاجون مساعدة اما اذا	if the children face any difficulties, or if they
كانوا مستمتعين ومنخرطين في اللعب	need any help, but if they are enjoying and
تتركهم دون تدخل."	engaged in play, she does not interfere.

Such responses showed that these teachers viewed a big part of their role to be creating an environment for children to interact with each other. Another example was Maryam's claim in the *pre-initiative* interview that the activities she prepared could help children interact with each other and make friends:

... هذه الأنشطة تساعدهم على التفاعل مع	…these activities help them interact with their
أصحابهم. في بعض الأحيان عندما يواجهون	peers. Sometimes when they face difficulties,
صعوبات، يطلبون من أصدقائهم مساعدتهم.	they ask their friends to help them. I give
أمنحهم الفرصة لمساعدة بعضهم البعض،	them the chance to help each other, and I help
وأساعدهم في تكوين صداقات من خلال	them make friends through activities,
الأنشطة، خاصة في بداية العام.	especially in the beginning of the year.

These responses agreed with the literature outlining the early childhood teacher's role of facilitating friendship when "they design opportunities that promote peer engagement, help children sustain and enhance play, and help children resolve conflict" (NAEYC, 2022, p. 11). In her *pre-initiative* interview, for example, Maryam mentioned helping children solve problems through dialogue, as discussed under Theme 2 (problem-solving). She also mentioned giving children the chance to have a dialogue among themselves, which she viewed as not only facilitating their making friends but also supporting language development, as discussed in a later subtheme. In the same vein, Kemple (2004) and Tan and Perren (2021) emphasized the importance of providing activities that promote positive social interactions among young children as well as the impact of supportive adults in facilitating social skill development and creating a

welcoming and inclusive environment for all children. Teachers' interest in creating an environment that supports friendship between children reflects their understanding of the influence of the social environment on the child's development, as confirmed by ecological systems theory (Bronfenbrenner, 1986), in which the microsystem (the family, kindergarten, peer group) has the most influence on development.

Observations conducted throughout the initiative supported teachers' claims that they prepared the environment for children to interact and interfered only when they felt they had to. However, their perspective on what constituted a necessary intervention changed over the course of the initiative. At first, they typically only stepped in when children faced a problem, but by the end of the initiative, they were intervening when they felt the need to support children's learning or encourage them to complete their work. This subtheme mainly emerged from the *pre-initiative* interviews and focus group, probably because the teachers were more focused on teacher-child interaction later on.

Behavior Management

The findings showed that participants considered managing children's behavior to be a critical role for teachers in the classroom. In her *pre-initiative* interview, for instance, Hanan said the teacher's role involved dealing with behavioral issues:

At this stage, the teacher plays a key role in changing some children's behavior, such as selfishness, stubbornness, and other behavioral problems…encourage them to share, express themselves…	في هذه المرحلة تلعب المعلمة دور أساسي في تغيير سلوكيات بعض الأطفال كالأنانية والعناد وغيرها من المشاكل السلوكية..تشجيعهم على المشاركة والتعبير عن أنفسهم...

According to Hanan, one of the ways a teacher can help a child solve these problems is by developing alternative behavior, in agreement with the NAEYC (2022).

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Nawal similarly said in the *pre-initiative* interview that the teacher's role includes solving children's behavioral problems, but she added the importance of spotting and talking about feelings and cooperating with families to solve problems:

The teacher notices if the child is upset or has a problem and asks about his feelings…if the child has any behavioral problems, she cooperates with the family to solve it using the same strategies at home and in school.	تلاحظ المعلمة إذا كان الطفل منزعجاً أو لديه مشكلة وتسأل عن مشاعره...إذا كان الطفل يعاني من أي مشاكل سلوكية تتعاون مع الأسرة لحلها باستخدام نفس الاستراتيجيات في المنزل والمدرسة.

Moreover, in her *pre-initiative* interview, Rana said that uncooperative parents hindered teacher-child interaction quality (see Theme 5). These claims that the teacher's role includes solving children's behavioral problems, working with families to solve problems, and recognizing children's feelings and how they express those feelings were aligned with the literature (e.g., NAECY, 2022).

Some teachers in the *pre-initiative* interview, such as Maryam, noted the importance of professional development on how to deal with behavioral problems:

Providing courses for teachers on dealing with children's behavioral problems.	تقديم دورات للمعلمات حول التعامل مع المشكلات السلوكية لدى الأطفال.

Based on my observations, teachers quickly noticed behavioral problems and tried to solve them, especially when there was a conflict or argument between children. As some of the teachers mentioned, they tried to get the children to solve their problems through dialogue (see the interaction strategy under Theme 3 and problem-solving).

One factor they reported that could help them avoid behavioral problems and manage classes was a high-quality learning environment (for more details, see Theme 4), as exemplified by Rana's response in the *pre-initiative* interview:

A high-quality environment makes children more engaged in activities and minimizes behavioral	البيئة الجيدة تجعل الاطفال أكثر انشغال في الأنشطة وتقلل المشاكل السلوكية

	بين الأطفال حتى لوحدثت مشاكل
problems among children. Even when problems	
happen, a good environment helps me solve	البيئة الجيدة تساعدني في حلها... هناك
it…there are a lot of alternative activities, for	الكثير من الأنشطة بديلة مثلا.
example.	

Another factor that supported behavior management were the class rules, as
mentioned in the monitoring subtheme, where teachers emphasized reminding children
about and letting them implement the rules. This concurred with Beazidou et al.'s (2013)
findings on non-punitive practices, such as classroom rules, encouraging children to be
responsible, and encouraging children to discuss topics involving behavior, emotions, or
situations of concern, as Nawal mentioned earlier about letting children talk about their
feelings.

A final example is from the *pre-initiative* focus group, in which teachers mentioned
similar points as before. Layla added that some children's behavioral problems could lead
to bigger problems, giving an example from her experience:

If the teacher doesn't pay attention to some	إذا لم تتنبه المعلمة لبعض المشكلات، فقد يزعج
problems, it can bother the whole class or	ذلك الفصل كله أو يجعل الطفل يشعر بالسوء
make the child feel bad about himself, and	تجاه نفسه، وربما يريد التوقف عن الحضور إلى
maybe he wants to stop coming to	الروضة... كان عندي طفل في فصلي لا يتوقف
kindergarten…I had a child in my class who	عن الحركة ويتكلم كان مثل المحرك..يزعج
wouldn't stop moving and talking, he was like	أصدقاءه..لا يستطيع إكمال أي نشاط..أبلغت
an engine…bothering his friends…couldn't	والدته ونصحتها بتشخيصه..الدكتورة قالت إنه
complete any activity…I informed his mother	مصاب باضطراب فرط الحركة ونقص
and advised her to diagnose him…the doctor	الانتباه..أعطتني كتاب من الدكتورة يشرح فيه
said that he had ADHD…she gave me a book	كيفية يمكن للمعلمين التعامل مع الأطفال
from the doctor explaining how teachers can	المصابين باضطراب فرط الحركة ونقص
deal with ADHD children.	الانتباه.

Layla's response aligned with Arumugam et al.'s (2020) recommendation that if behavioral issues in children are not treated, they can lead to more serious, disruptive problems. A proven method to help at-risk children is early identification, which then requires early intervention using effective positive behavior support.

Observations throughout the initiative showed that teachers were practicing what they claimed in the *pre-initiative* interviews and focus group. For example, they encouraged children to share and solve problems through dialogue (see Maryam's example in the problem-solving subtheme). Teachers viewed such problems as an educational event and implemented problem-solving strategies.

Overall, this subtheme emerged mainly from responses in the *pre-initiative* interviews and focus group, with different data not being found in the *post-initiative* interviews and focus group. However, teachers paid attention to the children's behavioral problems and managed those problems throughout the observation period. The teachers were already focusing on behavior management before the initiative, and this did not change as a result of the initiative.

The participants viewed managing children's behavior as one of their main roles. This role included noticing and addressing behavioral problems, sometimes with the cooperation of family. They also highlighted using the learning environment to avoid or resolve such problems.

Supporting Language Development

Teachers play a critical role in supporting children's language development by providing rich opportunities for interactive and responsive conversations.

The findings indicated that teachers supported children's language development in different ways, such as encouraging them to engage in conversation, as illustrated by Reema in the *pre-initiative* interview:

	If the child doesn't talk as much to me or to his friends and doesn't participate in circle time, I try to encourage him to talk to me and his friends, ask him about the activities, and give him enough time to answer. One of the activities that helps a child talk is to bring something from home (something he loves) and talk about it in front of his friends in circle time.

إذا كان الطفل لا يتحدث معي أو مع أصدقائه كثيرًا ولا يشارك في وقت الحلقة ، أحاول تشجيعه على التحدث إلي ومع أصدقائه ، واسأله عن الأنشطة ومنحه وقتًا كافيًا للإجابة. من الأنشطة التي تساعد الطفل على التحدث هو إحضار شيء من المنزل (شيء يحبه) والتحدث عنه أمام أصدقائه في وقت الحلقة..

Moneerah discussed this issue in the *pre-initiative* interview:

In the dramatic play corner, sometimes I play with children just to create a dialogue between children, and I encourage children who are shy or not integrated with the group to participate in the dialogue.

في ركن اللعب الايهامي، ألعب أحيانًا مع الأطفال فقط لخلق حوار بين الأطفال وأشجع الأطفال الخجولين أو غير المندمجين مع المجموعة على المشاركة في الحوار..

Maryam added the following in the *pre-initiative* focus group:

Children learn through…dialogue. I always try to have a conversation with them at the end of the day, in the last meeting, about what we have done during the day…children love roleplaying…it helps children's language and social development.

الأطفال يتعلمون من خلال... الحوار احرص على انه يكون هناك حوار نهاية اليوم في اللقاء الأخير عن ماعملناه خلال اليوم... لعب الأدوار محبب جدا للأطفال... يساعد في النمو اللغوي والاجتماعي.

Layla added the following:

For children, an interesting part of the day is the last meeting when they talk about what they did in the kindergarten that day. It is one of the best ways to

بالنسبة للأطفال فقرة ممتعة في اللقاء الأخير لما يتكلمون عن ايش سوو في الروضة، من افضل

create a dialogue with children and encourage them to talk.

<div dir="rtl">الطرق لخلق حوار مع الأطفال وتشجيعهم على الكلام.</div>

Observations during the first few weeks aligned with what teachers mentioned above. For example, in Week 3 in the Birds class. Rana introduced a new student Waleed to his classmates in the dramatic play corner:

Rana: This is your new friend Waleed. Can he play with you?

<div dir="rtl">رنا: هذا صديقك الجديد وليد. ممكن يلعب معكم؟</div>

Najla: Yes, come over, Waleed.

<div dir="rtl">نجلاء: نعم تعال يا وليد.</div>

Rana: What role will he play?

<div dir="rtl">رنا: ما هو الدور الذي سيلعبه؟</div>

Nasser: Um…the father and you're the grandmother.

<div dir="rtl">ناصر: الأب وأنت الجدة.</div>

Rana: Okay.

<div dir="rtl">رنا : اوكي .</div>

Rana pretended to be the grandmother for a few minutes until Waleed was engaging in the play and then she left the corner. I observed similar satiations in almost all classes when teachers encouraged children who were new or not engaged with the group to play with their peers. From my observations, teachers participated in children's pretend play during the first few weeks of the initiative mainly if the children asked them to take a role or they wanted a specific child to join the play, as in Rana's example.

Reema, Moneerah, Hanan, and Maryam also all mentioned show and tell as an activity to encourage children to talk (see Mortlock, 2014). Another way to encourage children to talk was having conversations with them. I observed several examples of these strategies during the initiative in circle time and the last meeting, but the current study focused on teachers' interaction in the corners time and outdoor play, so I have restricted examples to these two periods of the daily program.

Teachers in the *post-initiative* interviews and focus group mentioned several things related to supporting children's language development. For example, they emphasized listening to children, as illustrated by Maryam in the *post-initiative* focus group:

> Talking and listening to the children. Listening to children makes them feel that they are important, develop their language skills…they should talk more than the teacher…if the teacher is talking more, that is not high-quality interaction.

> التحدث والاستماع للأطفال. الاستماع للأطفال يشعرهم بأهميتهم، وينمي مهاراتهم اللغوية...يجب أن يتحدثوا أكثر من المعلم...إذا كان المعلم يتحدث أكثر، فهذا ليس تفاعلاً عالي الجودة.

Nawal added the following:

> Children love it when you listen to them, especially when you let them talk about their interests.

> يحب الأطفال الاستماع إليهم، خاصة عندما تسمح لهم بالتحدث عن اهتماماتهم.

Moneerah gave a related response in the *post-initiative* interview:

> She [the teacher] listens to the child talking, wondering, suggesting, and expressing himself.

> فهي [المعلمة] تستمع إلى الطفل وهو يتحدث ويتساءل ويقترح ويعبر عن نفسه.

Observations during the last few weeks showed that teachers sought to implement the initiative's target interaction strategies. This resulted in them participating more in children's play, having longer discussions, and trying to give children more effective feedback. As mentioned under Themes 1 and 2, the teachers sought to balance child-directed and teacher-guided play using high-quality interaction strategies. These findings aligned with studies suggesting a positive relationship between the quality of teacher-child interactions and children's language development (Justice et al., 2008; Sylva et al., 2008; Wasik & Hindman, 2011), such as receptive vocabulary competency (Yang et al., 2021), as well as academics (Howes et al., 2008) and social skills (Mashburn et al., 2008).

The observations revealed many examples of teachers roleplaying with children to foster language development. Similarly, various studies have found strong connections

between pretend play and language development; this is because pretend play offers a rich source of language stimulation for children, providing opportunities to develop and practice a range of language skills in a fun and exciting way (e.g., Berk, 2009; Lillard et al., 2013; Weisberg et al., 2013).

Another strategy discussed in the *post-initiative* focus group was listening to children. The Foundation for Child Development (2020) emphasizes the importance of teachers listening to children rather than talking to them, as research has shown that the amount of time teachers spend listening is a stronger predictor of children's outcomes in both academic and social domains. Additionally, Dickinson and Porche's (2011) longitudinal study found that the ratio of teacher talk to child talk during free play was related to positive outcomes for kindergarteners.

Several teachers (Hessah, Layla, Reema, Maryam and Fatmah) in the *post-initiative* interviews mentioned reading stories and singing songs, as exemplified by Hessah:

Reading stories is one of the most interesting activities for children. Also singing together.	تعتبر قراءة القصص من أكثر الأنشطة الممتعة للأطفال. الأناشيد مع بعض أيضا.

Layla gave this response:

Children like to sing. Sometimes we sing on our way to the playground or when we clean up…stories…children like some stories in particular; they keep asking me to repeat them.	الأطفال يحبون الاناشيد. أحيانًا ننشد في طريقنا للملعب أو لما ننظف...القصص...الأطفال يحبون بعض القصص على وجه الخصوص؛ دايم يطلبون اكررها.

Fatmah said the following:

I always add new stories to the library. Sometimes I read to one child in the library, and the other children hear me and want to join us.	دايم إضيف قصص جديدة إلى المكتبة. أحيانًا أقرأ لطفل واحد في المكتبة، فيسمعني الأطفال الآخرين ويريدون الانضمام إلينا.

This finding aligned with the literature, which has noted that language skills appear to be enhanced when children engage in a wide range of age-appropriate activities, such as reading with teachers, pretend play with peers (Sylva et al., 2012), and singing and reciting (Dowling et al., 2020).

In the *post-initiative* interviews, teachers also mentioned using vocabulary, extended discussions, and reading books to support language development.

Prior research has likewise found children's language development could be stimulated by teachers using more vocabulary during conversations with children; extended discourse on a single topic (rather than frequent topic switching); and a diversity of language-related activities, including storybook reading (Dowling et al., 2020), conversations related to children's experiences and interests, and pretend play (e.g., Dickinson & Porche, 2011; Sylva et al., 2012).

Summary of Theme 3

Theme 3 showed that the teachers in the present study viewed their role as encompassing monitoring children, solving children's behavioral problems, facilitating friendship, and supporting language development. This, in addition to other themes, answered the first and second research questions regarding how teachers perceived their practices related to teacher-child interaction quality before and after the initiative. This theme mainly addressed Research Question 1 regarding teachers' perspectives about teacher-child interaction quality.

Theme 4: Learning Environment

Theme 4 examines teachers' perspectives and practices regarding the learning environment in several subthemes: the reported impact of environment, characteristics of such an environment, learning outdoors, and how the environment can support children academically and socially.

The Impact of the Learning Environment

There was general agreement among teachers in the *pre-* and *post-initiative* interviews about the essential role played by the learning environment in teacher-child interaction quality. For example, Hanan mentioned this in the *pre-initiative* interview:

The environment is very important for interaction and plays a huge role in the child's learning.	البيئة مهمه جدا في التفاعل ولها دور كبير في تعلم الطفل.

Layla gave a similar sentiment in the *pre-initiative* interview:

The environment is the foundation of interaction.	البيئة هي الأساس للتفاعل.

In her *pre-initiative* interview, Fatmah gave a more detailed response:

A rich and suitable environment for both child and teacher is the foundation and the base of the pyramid for high-quality interaction.	البيئة الثرية والمناسبة للطفل والمعلمة هي الاساس وقاعدة الهرم للتفاعل العالي الجودة

In the *pre-initiative* interview, Moneerah described the environment as a place that "incubated" teacher-child interaction:

The environment plays a big role in the quality of interaction, as it is the place that incubates the interaction between the teacher and the child.	البيئة لها دور كبير في جودة التفاعل فهي المكان الذي يحضن التفاعل بين المعلمة والطفل.

These extracts from Hanan, Layla, Fatmah, and Moneerah agreed with the OECD's (2021) claim that the environment, including space and materials, affects the quality of interactions in early childhood settings. Another example was Rana's response in the *pre-initiative* interview:

The learning environment is very important and must be high quality so the interaction becomes high quality. A high-quality environment makes children more	بيئة التعلم مهمه جدا ولا بد ان تكون جودتها عالية حتى يكون التفاعل ذو جودة عالية. البيئة

engaged in activities and minimizes behavioral

problems among children.

الجيدة تجعل الاطفال أكثر انشغالا

في الأنشطة وتقلل المشاكل

السلوكية بين الاطفال.

Nawal gave a similar response:

The learning environment is very important, and

the higher its quality, the better the interaction

and the less behavioral problems among children.

بيئة التعلم مهمه جدا وكلما زادت

جودتها زادت جودة التفاعل وقلت

المشاكل السلوكية بين الاطفال.

These responses aligned with prior research (e.g., AGDE, 2022; Touhill, 2017) asserting that physical space has a powerful influence on teachers' interaction with children. The participants in the present study shared the belief that the physical environment and how it is organized shapes their behaviors as educators and children's behaviors as learners. Similarly, Conde-Vélez et al. (2023) emphasized that classroom organization is one of the key factors in ECEC interaction. Rana and Nawal's responses also agreed with Touhill's (2017) claim that a well-resourced learning environment could keep children more engaged in meaningful and extended learning, which gives educators the time for supportive interactions rather than simply policing behaviors and enforcing rules. These perspectives regarding the learning environment also aligned with ecological systems theory; Perlman et al. (2016) noted that in the microsystem, a variety of variables—such as the child's behavior and the classroom environment—can affect the quality of teacher-child interaction.

Cognitively, Socially, and Emotionally Supportive Learning Environments

Regarding supporting cognitive development, some participants mentioned the need for teachers to ensure all children are involved in playing and interested in activities, providing the educational activities and materials that attract children to play and learn. For example, Layla mentioned the following in the *pre-initiative* interview:

| The classroom is organized and attractive to the child, and the tools and activities are always engaging to help children develop and learn. | الفصل منظم وجذاب للطفل ، والأدوات والأنشطة دائمًا جذابة |

Rana said this in the *pre-initiative* focus group:

| Through activities in the corners, children can learn different things and concepts, mathematics, science, reading and writing…in an attractive and fun way. | من خلال الأنشطة في الزوايا يستطيع الأطفال تعلم أشياء ومفاهيم مختلفة، الرياضيات والعلوم والقراءة والكتابة... بطريقة جذابة وممتعة |

Reema added the following:

| The environment should have a variety of activities and materials…almost every day we add something new. | يجب أن تحتوي البيئة على مجموعة متنوعة من الأنشطة والمواد... كل يوم تقريبًا نضيف شيئًا جديدًا. |

From the observations, I could confirm that what the teachers mentioned regarding their role with children represented their reality. For example, they emphasized that their main role was to prepare the environment for children to play and interact with each other with minimum interference from the teacher. Children were given opportunities to make friends and the teachers helped them in this regard by preparing the environment (see the facilitating friendship subtheme). Each time I entered a class, I took notes about new activities or materials that teachers provided to each corner. Sometimes I even found that they had added a whole corner to the learning environment. I always saw the teachers busy preparing activities for children during their breaks or at the end of the day after children left. In general, teachers paid great attention to preparing the environment.

Teacher-child interactions characterized by warmth, responsiveness, and cognitive stimulation have been associated with better social-emotional outcomes for children (Mashburn et al., 2008). In this vein, participants mentioned closeness to the child as a characteristic of high-quality interaction, the teacher's unconditional acceptance for all

children, treating children with love and tenderness, getting down to a child's level physically, and communicating with children. Closeness is an important feature that describes the degree to which the teacher and child have a warm and supportive relationship (Hamre & Pianta, 2007; NAEYC, 2018). This characteristic is illustrated by a response from Layla in the *pre-initiative* interview:

In my opinion, good interaction is characterized by closeness to the child. When the child considers the teacher as his second mother and expresses his feelings to her, that is good interaction.	في رأيي ، يتميز التفاعل الجيد بالقرب من الطفل. عندما يعتبر الطفل المعلمة أمه الثانية ويعبر لها عن مشاعره هذا هو التفاعل الجيد.

Other characteristics of high-quality interaction mentioned by teachers were ensuring no children are isolated for a long time in the relaxation corner, constantly interacting with the children, and keeping harmony between the teacher and children. For example, Reema said the following in the *pre-initiative* interview:

Treating children with tenderness, love, and acceptance. There is harmony between the teacher and the children.	معاملة الأطفال بالحنان والمحبة والقبول. هناك انسجام بين المعلمة والأطفال.

Another example came from Rana in the *pre-initiative* interview:

Getting down to the child's level, physically and verbally. I make sure that all the children interact and enjoy the activities. I make sure no child doesn't know what to do or stays isolated for a long time in the relaxation corner. The teacher always interacts with the children and answers their questions and sometimes plays with them.	النزول إلى مستوى الطفل جسديًا ولفظيًا. أتأكد من أن جميع الأطفال يتفاعلون ويستمتعون بالأنشطة. أتأكد بانه لا يوجد طفل لا يعلم ماذا يفعل أوان لا يبقى منعزلاً لفترة طويلة في ركن الاسترخاء. تتفاعل المعلمة دائمًا مع الأطفال وتجيب على أسئلتهم وتلعب معهم أحيانًا.

Other characteristics were mentioned by a small number of teachers in individual *pre-initiative* interviews, such as providing the appropriate academic as well as social environment, as noted by Reema:

Providing an appropriate atmosphere socially and academically for the child's needs, an atmosphere that helps the child maximize his learning and development.	توفير جو مناسب اجتماعيًا وأكاديميًا لاحتياجات الطفل، جوًا يساعد الطفل على تحقيق أقصى قدر من التعلم والنمو.

Reema mentioned other characteristics as well:

The teacher is supposed to be smiling, affectionate, close to the children.	من المفترض أن تكون المعلمة مبتسمة وحنونة وقريبة من الأطفال.
The teacher strengthens the relationships between children, promoting sharing.	تقوم المعلمة بتقوية العلاقات بين الأطفال وتعزيز مبدأ المشاركة.

Fatmah also discussed several characteristics:

The teacher shows her enthusiasm to interact with the child to make him feel that he is important and his ideas are valuable. Interacting in an appropriate way to the child's age.	تظهر المعلمة حماسها للتفاعل مع الطفل مما يشعره باهميته واهمية افكاره. نتفاعل بطريقة مناسبة لسن الطفل.
There is an exchange of roles between the teacher and the child (asking, discussing, interacting…)	هناك تبادل للأدوار بين المعلمة والطفل (السؤال ، المناقشة ، التفاعل ..)

Moneerah said that good teacher characteristics included the following:

The teacher supports the child's learning in all aspects: language, literacy, socially, and emotionally.	المعلمة تدعم تعلم الطفل من جميع النواحي اللغوية، القراءة والكتابة، اجتماعياً وعاطفياً.

The characteristics above were mainly mentioned by teachers in the *pre-initiative* interviews and focus group or in both *pre-* and *post-initiative* interviews and focus groups. In contrast, the following characteristics were mentioned only in the *post-initiative*

interviews and focus group. In the *post-initiative* focus group, teachers mentioned the following:

Moneerah: The relationship between the teacher and the child is bi-directional in all aspects, including emotional, social, and academic aspects…

العلاقة بين المعلمة والطفل ثنائية الاتجاه في جميع الجوانب بما في ذلك الجوانب العاطفية والاجتماعية والأكاديمية ...

Nawal: The teacher is sensitive, affectionate, and kind.

المعلمة حنونة .. و لطيفة.

Layla: A safe and comfortable environment in which the child feels he is safe and belongs, so he can explore and learn.

بيئة آمنة ومريحة يشعر فيها الطفل بالانتماء والأمان تشجعه على التعلم والاكتشاف

Those characteristics aligned with Hamre et al. (2014) and the National Scientific Council on the Developing Child (2004). The findings also reflected the value of teacher-child interaction as articulated by Howard et al. (2018).

The characteristics mentioned by teachers before and after the initiative were similar, but they appeared more comfortable using the term "teacher-child interaction quality" and were more fluent and confidant when talking about characteristics in the *post-initiative* interviews and focus group.

Characteristics of a Good Learning Environment

The characteristics of a high-quality learning environment according to the teachers could be grouped under three categories: general characteristics, characteristics of an indoor environment, and characteristics of an outdoor environment (discussed in a separate subtheme). In general, most teachers said safety was the most important characteristic, as exemplified by Hessah in the *pre-initiative* interview:

The most important thing is safety in the environment…materials and toys are all safe

أهم شيء هو السلامة في البيئة. البيئة بشكل عام ، المواد والألعاب كلها آمنة ومناسبة

| and suitable for children's age to avoid any accidents, available first aid kit in the classroom. | للأطفال لتجنب أي حوادث ، تتوفر شنطة الإسعافات الأولية في الفصل. |

This emphasis on safety was likely a reflection of what has been emphasized in early childhood education and care policies (see OECD, 2021).

Sufficient space was also mentioned by most teachers as a major positive environmental characteristic. For example, Hessah gave the following response in the *pre-initiative* interview:

| Indoor environment, the classroom is spacious enough for the number of children. | البيئة الداخلية الفصل واسع يكفي عدد الأطفال. |

Other characteristics teachers mentioned included richness, materials that are renewed, variety, and real-world experiences from the local area. This could be seen, for example, in Moneerah's response:

| The most important characteristics and components of the environment is being safe, rich, constantly renewable, whether indoors or outdoors, and varied. Renewed is the most important, close to the reality of the child, real and derived from the local environment. | أهم خصائص ومكونات البيئة ان تكون آمنة، غنية، متجددة باستمرار، سواء البيئة الداخلية أو الخارجية، متنوعة. التجديد هو الأهم، قريبة من واقع الطفل، حقيقية ومستمد من البيئة المحلية. |

Moneerah and Reema mentioned similar ideas in the *pre-initiative* focus group, and the group agreed with them. Moneerah said the following:

| The chance of high-quality interaction increases…if the activities' tools and materials are available and derived from the child's environment [home/cultural environment] such as, desert, palm trees, and dates. | تزداد فرصه التفاعل عالي الجودة... اذا كانت الخامات والادوات للأنشطة متاحة ومستمدة من بيئة الطفل، البيئة الثقافية، مثل الصحراء، النخيل، التمر. |

Reema gave this response:

A stimulating environment for children is a high-quality environment.	البيئة المحفزة للطفل هي البيئة الي جودتها عالية.

Layla and Hanan both pointed out attractiveness as an important characteristic. Layla said the following:

The classroom is comfortable, organized, and attractive to the child...the tools and activities are always attractive.	الفصل مريح منظم وجذاب للطفل... الادوات والأنشطة دائما تجذب.

Hanan added diversity and age appropriateness:

A variety of tools and materials that are attractive to the child and suitable for his age invite him and attract him to learn.	تنوع الأدوات والخامات وتكون جذابه للطفل ومناسبه لسنه تدعوه وتشده يتعلم.

These elements (comfortable, attractive, varied in terms of activities and material, organized and free of clutter, and stimulating) all agreed with previous studies and international standards, such as the NAEYC (2018), the Michigan Department of Education (2021), and HighScope (2019). The above responses also concurred with Touhill (2017), who underlined the importance of a rich and inviting environment in providing children with the opportunity to engage in meaningful experiences for learning.

Regarding indoor areas, teachers mentioned several general positive characteristics as well as ones specific to learning corners. This was exemplified by Reema in the *pre-initiative* interview:

…appropriate furniture…classroom space is suitable for the number of children…tools and materials are suitable for the number of children…wide pathways.	الاثاث ملائم.. الفصل مناسب لعدد الأطفال... الادوات والخامات مناسبه لعدد الأطفال... الممرات واسعه.

Suitable classroom space was mentioned as important by all teachers. Fatmah even defined an appropriate space per child as four square meters in the *pre-initiative* interview:

The classroom is supposed to offer four square
meters for each child and the number of children is
determined by the space of the classroom.

مفروض يكون لكل طفل في الفصل
٤ متر مربع وعدد الأطفال في
الفصل يتحدد حسب مساحه الفصل.

This is similar to NAEYC's (2018) recommendation of having 35 square feet
(about 3.25 square meters) for each child in an indoor activity area. Maryam mentioned
other characteristics in the *pre-initiative* interview:

Good lighting, air conditioning, and
ventilation.

التهويه. الاثاث الجيد و بحاله جيده، المساحه كافية
و مناسبه لعدد الاطفال.

Agreeing with Maryam about good lightning and air conditioning in the *pre-initiative*
interview, Nawal added some components no one else mentioned (i.e., a board and
projector):

The classroom must have a board and
projector...good lighting, and air
conditioning.

مفروض يكون في الفصل سبورة وبروجيكتر..
اضاءة جيدة وتكيف جيد.

Hessah also described how the classroom should look in the *pre-initiative* interview:

The classroom should be spacious enough for
the number of children and divided into several
corners appropriately, wide and tidy.

الفصل واسع يكفي عدد الاطفال، مقسم
لعدة اركان بشكل ملائم واسع ومرتبه.

According to the teachers, the location and space for learning corners are important
characteristics, such as Layla's response in the *pre-initiative* interview:

Suitable space of the corners, suitable for the
purpose of the corner. I mean for example the
dramatic play corner needs a bigger space than the
reading corner for example…Quiet corners close
to each other, and loud corners close to each
other… The art corner is close to the door and

مساحة الأركان ملائمة، ملائمة للهدف
من الركن، قصدي مثلا ركن اللعب
الايهامي يحتاج مساحة اكبر من ركن
المكتبة مثلا .. الأركان الهادية جنب
بعض والصاخبة جنب بعض.. ركن
الفن قريب من الباب والحمام عشان

bathroom, so children can go to wash their hands after painting and put their drawings outside until they dry.

الأطفال يغسلون يديهم بعد ما يلونون ويحطون رسوماتهم برا لين تنشف.

In her *pre-initiative* interview, Nawal emphasized that corners should have enough space for five children or more and mentioned the richness of tools and materials:

Spacious corners, each corner is enough for at least five children…corners rich in tools and materials.

الأركان واسعة، كل ركن يكفي ٥ أطفال على اقل... الأركان غنية بالادوات والخامات.

Rich and attractive corners with a variety of materials and tools were mentioned by some of the teachers as an important characteristic, such as Layla's response in the *pre-initiative* interview:

The corners are attractive, rich, and varied in materials and educational means…toys, tools.

الأركان جذابة، غنية ومتنوعة الخامات والوسائل التعليمية... الأدوات والألعاب.

Another example came from Hanan's response in the *pre-initiative* interview:

Diversity and richness of corners' tools and materials that are attractive to the child and also suitable for his age.

تنوع وثراء الأركان بالادوات والخامات الجذابة للطفل والمناسبة لعمره أيضا.

Maryam explained in the *pre-initiative* focus group why a rich environment was important from her point of view:

If children are engaged in the activities, and every child is busy and has interesting activities, this means that the environment is rich and well-prepared.

اذ الأطفال مندمجين بالانشطة، وكل طفل مشغول وعنده نشاط ممتع يسويه، هذا يعني ان البيئة غنية ومعدة اعداد جيدا.

Reema and Maryam mentioned furniture as an important component as well. For example, Reema gave this response in the *pre-initiative* interview:

Appropriate furniture suitable for children's size and in a good condition appropriate for each corner. Some corners need a table, some need carpet…chairs for teachers.	الأثاث الملائم والمناسب لحجم الطفل وبحالة جيدة ومناسب لكل ركن، بعض الأركان تحتاج طاولة وبعضها تحتاج سجادة... كراسي للمعلمات.

Maryam mentioned the same in her *pre-initiative* interview:

High-quality furniture that is appropriate for children and in good condition…	الأثاث عالي الجودة الملائم للأطفال وبحالة جيدة.

My observations largely supported participants' claims in the interviews and focus groups. However, some classroom elements were not mentioned by teachers, as described in the introduction. For example, the corners were divided appropriately, with noisy and quiet corners farther away from each other. Also, I regularly found new activities and materials being added to all corners. For example, in Week 3 when observing Hanan and Fatmah in the Birds class, I noticed that each corner had at least one new activity or material since the previous week. They had added new colored plastic blocks to the blocks corner. In the dramatic corner, they had added a café with toys in the shape of a coffee machine, coffee cups, cake, and donut. One of the teachers told me that she added a new story that day to the library corner, dough to the art corner, and a new science experiment to the discovery corner (weight scale).

As another example, in Week 7 while observing Hessah in the Rainbow class, I noted a construction work corner had been added that contained workers' clothes, construction tools, and toys (buckets, paintbrushes, and cones). In the puzzles and manipulative games corner, there were puzzles for different professions' uniforms. In the library was a story about different professions. A water corner had been added, a table outside the classroom next to the back door of the classroom. In the art corner, there were new materials for recycling, and in the blocks corner, there were new figures for different professions.

In general, until the last day of the observations, the teachers paid special attention to the learning environment in terms of organization and renewing activities and materials. All observed characteristics in the classrooms were aligned with the most recent international standards and studies, such as the OCED (2021), NAEYC (2022), AGDE (2022), and Michigan Department of Education (2021).

Offering a variety of materials and activities for child-guided (free) play is very beneficial for children according to Sandseter et al. (2022). In that study, the indoor environment in participating institutions afforded predictable play types in confined spaces designed and furnished for certain kinds of play activities. Additionally, it was observed that the indoor environment had a significant influence on children's play behavior, with certain environments being more conducive to specific types of play. The authors suggest that teachers need to balance the creation of structured environments that support predictable play with the need for children to have the freedom to bring their own initiatives, ideas, and creativity into their play in unpredictable ways.

Teachers' stated perspectives about learning environment before and after the initiative were very similar; however, few points they added in the *post-initiative* interviews and focus group. First, Rana and Maryam mentioned that high-quality interaction involved asking children for their opinions and suggestions regarding the learning environment, something that was discussed in the learning environment workshop. Rana mentioned this in the *post-initiative* interview:

Asking children about their opinions and suggestions regarding the learning environment and the activities.	سؤال الأطفال عن آرائهم واقتراحاتهم بخصوص بيئة التعلم والأنشطة.

Maryam gave a similar response in her *post-initiative* interview:

The teacher takes children's opinions and
suggestions into consideration when planning
for activities or changing anything in the
classroom.

المعلمة تأخذ راي الأطفال بعين الاعتبار
عندما تخطط للأنشطة او عند تغيير أي
شيء في الفصل.

Another point made by two teachers was the need for open-ended materials, an idea
discussed in several workshops. In the *post-initiative* interview, Fatmah mentioned this
characteristic as follows:

The teacher uses a variety of educational means
and materials, especially those that are open-
ended, which encourage the child to be creative
and innovative.

المعلمة تستخدم وسائل تعليمية متنوعة،
خصوصا ذات النهايات المفتوحة، التي
تشجع الطفل على انه يبتكر ويبدع.

Hanan gave a similar answer in her *post-initiative* interview:

The teacher must…prepare tools and
materials, especially open-ended materials.

المعلمة لازم... تجهز الأدوات والخامات،
خصوصا الخامات الي تكون نهايتها مفتوحة.

Other additions could be seen in Fatmah and Moneerah's responses that reflected
ideas discussed in the learning environment workshop, as in Fatmah's response in the *post-
initiative* interview:

Educational means suitable for learning objectives,
at the same time visual and sensory. For example, if
you want to teach children about sheep, you can
bring them a picture of sheep, some sheep wool,
and play a clip of its voice. However, it is better if
you take them to a farm where they see the sheep in
its natural environment…real experiences are
always better. Taking the children to the zoo, for
example, is better than just talking about the

تعد وسائل تعليمية ذات جودة ومتنوعة
وجذابة ومناسبة للاهداف التعليمة
وتجمع بين ان تكون حسية وبصرية
بنفس الوقت، مثلا اذا اردت ان اعلمهم
عن الخروف   احضر لهم صورته
وصوفه واسمعهم صوته والافضل ان
اخذهم مزرعة يرون الخروف في بيئته
الطبيعية. الخبرات المباشره افضل،
اخذهم حديقة الحيوانات في رحلة

animals. Planting some seeds themselves, watching and watering their plants is better than just showing some pictures.

افضل من الحديث فقط عن الحيوانات، ويزرعون بانفسهم ويراقبون زرعاتهم ويسقونها

In her *post-initiative* interview, Moneerah mentioned similar points to Fatmah, emphasizing outside experiences as an important learning resource in kindergarten. She also discussed giving children roles and responsibilities in preparing the learning environment:

The experiences outside of kindergarten are very important, such as trips…Giving children roles and responsibilities in preparing and preserving the environment, such as the responsibility of hygiene, watering plants, and assisting the teacher in preparing materials for activities…planning and suggesting the activities.

الخبرات خارج الروضة جدا مهمة مثل الرحلات...اعطاء الأطفال أدوار ومسؤوليات في اعداد البيئة والمحافظة عليها مثل مسؤلية النظافة وسقي الزرع ومساعدة المعلمة في تحضير الخامات للانشطة... التخطيط واقتراح الأنشطة.

Teachers viewed a good learning environment as essential to promoting high-quality teacher-child interaction. This agreed with previous studies (e.g., AGDE, 2022; Michigan Department of Education, 2021; NAEYC, 2022; OCED, 2021). Teachers' emphasis on physical characteristics was likewise supported by the literature (e.g., Burchinal et al., 2015; Soliday Hong et al., 2019; Touhill, 2017) as the physical arrangement of learning areas can improve engagement (Farquhar, 2003) and teacher-child interaction (HighScope, 2019; Michigan Department of Education, 2021; NAEYC, 2018). Furthermore, physical characteristics such as the size of the play space can affect children's cognition, emotion, and behavior (Tonge et al., 2016). Since teachers did not mention all such characteristics, and due to the breadth of this topic, I focused on perceptions about the learning environment as a factor in interaction quality.

Outdoor Learning Environment

This subtheme discusses the teachers' perspectives about the characteristics of a high-quality outdoor learning environment and their interactions with children outdoors.

Most teachers cited sufficient space as a major positive characteristic. For example, Hessah gave the following response in the *pre-initiative* interview:

The outdoor environment must be spacious.	البيئة الخارجية، لازم تكون واسعة.

Nawal placed a similar emphasis on spaciousness in her *pre-initiative* interview:

The outdoor playground is important for children's development. The children enjoy a lot playing outdoors. Children are always active and energized. They need a spacious playground to use their energy.	الملعب الخارجي مهم لنمو الأطفال، الأطفال مره يحبون يلعبون برا، الأطفال دايم نشيطين وفيهم طاقة ويحتاجون ملعب واسع يطلعون طاقتهم فيه.

Similar characteristics were mentioned in the *pre-initiative* focus group:

Layla: A spacious playground is essential for the development of children.	ليلى: الملعب الواسع ضروري لنمو الأطفال.
Rana: High-quality equipment for the children's safety.	رنا: معدات عالية الجودة لسلامة الأطفال.

Rana's response was similar, but she added "stimulating" and "renewed" as important characteristics as well:

The two most important elements in the environment, whether indoors or outdoors, are constantly renewed and stimulating for children.	اهم عنصرين في البيئة سواء الداخلية او الخارجية هي ان تكون متجددة ومحفزة للطفل.

Maryam and other teachers mentioned that safety in general was important but that it was even more important outdoors. This view could be seen in an extract from Maryam's *pre-initiative* interview:

Safety is the first and most important characteristic in kindergarten, especially in the playground because accidents can happen.	اهم وأول خاصية هي الامن والسلامة في الروضة خصوصا في الملعب الخارجي لان ممكن تصير حوادث.

Similarly, in Erdem (2018), teachers saw the outdoors as a riskier place, and their main concern in that environment was children's safety. Coleman and Dyment (2013) had similar findings.

Teachers said the most important component of an outdoor environment was high-quality playground equipment in good condition, including swings, slides, and monkey bars. Others were a large sand area with enough toys and tools in good condition, a bicycle area, and a large area for organized group games. For example, Reema listed many of these features in the *pre-initiative* interview:

The outdoor environment is very important. It has to include a large bike area, swings, slides, a large sand area with enough sand tools and toys in good condition, and a big yard for organized group games.	البيئة الخارجية جدا مهمة ويجب ان تحتوي على منطقة كبيرة للدراجات، مراجيح، زحاليق، ملعب رمل وفيه عدد كافي من الأدوات والألعاب بحالة جيدة و أيضا ساحة كبيرة مخصصة للألعاب الجماعية المنظمة.

Hessah added the following in the *pre-initiative* interview:

The outdoor yard should be covered, I mean shaded because the weather most of the year is sunny and very hot.	الساحة الخارجية مفروض تكون مغطية، اقصد مظللة لان الجو معظم السنة مرة حار.

In the *pre-initiative* interview, Nawal explained how the bicycle yard should be similar to the yard that her kindergarten had:

A bicycle yard has figures of a gas station, a traffic light, and small figures or wooden buildings such as a school, a hospital, and a supermarket.	ساحة الدرجات فيها مجسمات لمحطة بنزين، إشارة مرور، ومجسمات او مباني خشبية صغيرة مثل مدرسة، مستشفى، سوبرماركت.

Similar features were mentioned in the *pre-initiative* focus group. These features have been cited by educational organizations around the world as essential elements of an outdoor learning environment (e.g., NAEYC, n.d.). They have also been included in standards for early childhood education programs around the world (e.g., Michigan Department of Education, 2021). Hessah added an important element: offering shade to the outdoor play area, aligning with international standards (e.g., NAEYC, 2022). According to these authorities and similar to what teachers mentioned, an outdoor learning environment should ideally include adequate space for various types of play (e.g., playing games, exploring nature), stationary equipment (e.g., slides, swings), portable equipment (e.g., bikes, blocks), and materials for content learning. Regarding the last point, teachers mentioned having a sand area, which could be seen as material for learning using tools and toys.

I also examined the teachers' role in one of the most important periods in the kindergarten's daily program: outdoor playtime. As Tonge et al. (2018) and Yoong et al. (2022) noted, outdoor environments provide valuable opportunities for children's learning and development.

Based on my observations and discussions with teachers during and after observation, and individual *pre-initiative* interviews, the teachers' role during outdoor time tended to be passive and focus mainly on monitoring children's safety. In addition, there was always a large number of children for one teacher (28–30 children), as one of the two teachers took a break during outdoor playtime. The teachers generally reminded the children about the outdoor play time rules in the beginning of the period (for their safety and to avoid accidents) then sat on a chair and watched the children play (see example in the monitoring subtheme).

Overall, from my observations, I noticed that teaches interacted with children outdoors in three situations: if a teacher saw the children doing something potentially

dangerous, if there was a behavioral problem such as saying bad words or not sharing toys or taking turns, and when the children asked the teacher questions or talked to her about something. During the 12 weeks of observation, I saw only two teachers (Moneerah and Layla) do a 20-minute group activity with children outdoors. These interactions are illustrated in the following examples.

The first example is when a teacher saw a child doing something potentially dangerous. In Week 2 in the Birds class with Fatmah, a child named Ali was climbing on top of the playground equipment so high that he could fall and get hurt, in a place the teacher could not reach. When she noticed this, she ran over and told him to get down carefully. He did not listen to her at first, but she insisted that he needed to get down. After 2–3 minutes of her talking to him, he finally came down.

Next is an example from my observation of teacher-child interaction dealing with a behavioral problem in Week 4 in the Bees class with Rana. The teacher was sitting monitoring the children playing in the playground. Danah came to her and said Hamad was saying bad words. Rana asked Hamad to come over, and this dialogue happened:

Teacher Rana: I heard you saying bad words to Danah. Do you think Danah is happy to hear those words?	المعلمة رنا: سمعتك تقول لدانه كلمات مو كويسه، هل تعتقد دانه سعيدة انها تسمع هالكلام؟
Hamad: No.	حمد: لا
Teacher Rana: What are you supposed to do now?	المعلمة رنا: وش لازم تسوي اللحين؟
Hamad: Apologize to Danah.	حمد: اعتذر لدانه.
Teacher Rana: Okay, apologize to her.	المعلمة رنا: اوكي اعتذر لها.
Hamad: Sorry, Danah.	حمد: آسف دانه.
Teacher Rana: Do you forgive him now?	المعلمة رنا: تسامحينه يادانه؟
Danah: Yes.	دانه: أيه.

	المعلمة رنا: خلاص تقدرون تروحون
Teacher Rana: You can go back to playing now.	تلعبون اللحين .

The following example from my observation also occurred when a child asked a question and initiated a conversation with the teacher. In Week 7 in the Birds class, a child (Nawaf) asked the teacher (Hanan) about one of the trees:

Nawaf: Why doesn't this tree have any leaves?	نواف: ليش هاذي الشجرة ما عندها أوراق
Teacher Hanan: Why do you think it doesn't have leaves?	المعلمة حنان: وش رايك ليش ماعندها أوراق؟
Nawaf: Maybe because we don't water it.	نواف: يمكن لأننا مانسقيها؟
Teacher Hanan: I don't think so. The watering system works automatically. What else?	المعلمة حنان: ما توقع، نظام الري يشتغل اتوماتيك.
Nasser: I know, because it will have new leaves.	ناصر: انا اعرف، لانها بتطلع أوراق جديدة.
Sarah: No, it's dead. It's just like the tree in front of our house.	سارة: لا، عشانها ماتت زي الشجرة الي قدام بيتنا.
Teacher Hanan: When we study the trees, we will know. [Trees is one of the concepts in the water unit in the self-learning curriculum]	المعلمة حنان: لما ندرس الأشجار بنعرف.

Hanan might have lost potential opportunities to engage further with children to enrich and extend their learning based on their questions and interests. Yoong et al. (2022) and Maynard and Waters (2007) mentioned that outdoor play involved potential learning opportunities that teachers could use to enrich children's learning.

Finally, this example from my observations illustrates interaction as part of a group activity in the playground in Week 5 in the Colors class. I saw Moneerah doing a group activity in the playground, a race around the cones, using cones and a whistle. Although

the activity was very simple, the children were laughing and appeared happy to run around the cones.

As noted previously, the teachers' role during outdoor time tended to be passive and focus mainly on monitoring children's safety, solving behavioral problems (resolving conflicts), and answering children's questions. This perspective toward teacher-child interaction during an important time in the daily program was not in line with studies that view teacher-child interaction quality as daily social and instructional exchanges within a positive environment (e.g., Hamre et al., 2014; Howe et al., 2021; Howes et al., 2008; Manning et al., 2019; Maynard & Waters, 2007; NAECY, 2022; OECD, 2021).

Data from the *post-initiative* focus group, interviews, and observations revealed no changes in teachers' perspectives and practices regarding outdoor teacher-child interaction. However, they were impressed with AnjiPlay, as discussed in Chapter 2. Although they emphasized children's safety in the *pre-initiative* interviews and focus group (see monitoring subtheme), they said they would like to balance their current approach to outdoor safe play with the potentially riskier AnjiPlay by introducing some of its activities, such as building with big blocks and using ladders and barrels (but smaller than in AnjiPlay). They recommended it as a solution to high teacher-child class ratios. For example, Layla discussed this in the *post-initiative* interview:

I like AnjiPlay and I wish we could implement it in our kindergarten…That's how we used to play when we were kids…kids need some challenges, risky play. Boys especially get bored quickly from playing with sand, swings, and slides. It can be applied in a less dangerous way, such as using smaller barrels and shorter ladders on	اعجبتني طريقة انجي بلاي وأتمنى أن نتمكن من تطبيقها بالروضة عندنا...هذه هي الطريقة التي كنا نلعب بها عندما كنا أطفال... يحتاج الأطفال إلى بعض التحديات، اللعب الي فيه شوية مخاطر. يشعر الأولاد بشكل خاص بالملل بسرعة من اللعب بالرمل والمراجيح والزحاليق. ويمكن تطبيقه بطريقة أقل خطورة، مثل استخدام براميل أصغر وسلالم أقصر على أرضية آمنة

a safe and flexible floor…Building with big blocks is very interesting and safe too.	ومرنة...البناء باستخدام المكعبات الكبيرة مرة يحمس وآمن بعد.

Similar responses are given under the professional development theme. The concerns teachers voiced about outdoor safety echoed the findings of Sandseter and Sando (2016).

Summary of Theme 4

This theme focused on the physical, social, and emotional learning environment. Teachers showed an awareness of the importance of environment in learning and development as well as the characteristics of a high-quality environment (indoors and outdoors). However, they showed a lack of interaction and activities outdoors before and after the initiative. These findings were related to Research Question 3 regarding changes in practices; while teachers did not change their practices outdoors, they did start considering children's interests and opinions and providing more open-ended materials indoors. This theme also addressed Research Question 4 regarding the factors affecting teacher-child interaction quality, with teachers mentioning learning environment as a major factor.

Theme 5: Factors Affecting Teacher-Child Interaction Quality

Teachers also mentioned the learning environment among other factors that enabled high-quality teacher-child interaction, as Moneerah stated in her *post-initiative* interview:

Providing an educationally appropriate environment for the children's needs, which helps and forms the basis of high-quality teacher-child-interaction…I mean the physical environment of the kindergarten: building, furniture, material, etcetera.	توفير بيئة تعليمية مناسبة لاحتياجات الأطفال، مما يساعد ويشكل أساسًا لتفاعل عالي الجودة بين المعلمة والطفل... وأعني البيئة المادية لرياض الأطفال: المبنى، والأثاث، والمواد، وما إلى ذلك.

Since environment was discussed above, the other factors they mentioned are discussed as subthemes below: professional development, positive and stimulating work environment, and parents (communication and cooperation).

Professional Development

There was mostly agreement between teachers' responses about the importance of professional development as an enabler of high-quality teacher-child interaction. This is illustrated by Fatmah's response in the *pre-initiative* interview:

Offering training courses for teachers is an effective way to motivate the teacher and raise the level of quality.	تقديم الدورات التدريبية للمعلمات هو وسيلة فعالة لتحفيز المعلمة ورفع مستوى الجودة.

Maryam similarly responded in the *pre-initiative* interview, naming some important training courses:

Providing courses for teachers…how to stimulate thinking and creativity in children… high-quality interaction strategies…	تقديم دورات للمعلمات…كيفية تحفيز التفكير والإبداع لدى الأطفال…استراتيجيات تفاعل عالية الجودة…

Fatmah likewise mentioned it in the *post-initiative* interview:

To develop education in Saudi kindergartens…teachers' development is one of the most important factors.	لتطوير التعليم في رياض الأطفال السعودية.. تطوير المعلمات من أهم العوامل.

This sentiment was echoed by Hessah:

Workshops that focus on improving teacher-child interaction quality can help in improving the quality.	يمكن أن تساعد ورش العمل التي تركز على تحسين جودة التفاعل بين المعلمة والطفل في تحسين الجودة.

These responses aligned with prior findings that professional development can improve teacher-child interaction quality in early childhood education (e.g., Early et al., 2017). Another study found that online professional development enhanced interaction

(Pianta, et al., 2008). Furthermore, the OECD (2020a) noted that professional development could lead to better health, education, and social outcomes.

Working Conditions

Based on the literature (e.g., Markowitz & Seyarto, 2023; OECD, 2011; OECD, 2020a), it was not surprising that participants in the present study mentioned work conditions (e.g., a stimulating working environment) as one of the factors that enabled high-quality teacher-child interaction, as illustrated by Fatmah's response in the *pre-initiative* interview:

Motivating the teachers and creating a positive and stimulating work environment that helps the teacher interact with children effectively.	تحفيز المعلمات وخلق بيئة عمل إيجابية ومحفزة تساعد المعلمة على التفاعل مع الأطفال بشكل فعال.

Teachers gave similar responses in the *pre-initiative* focus group, adding points such as incentives for teachers and supporting and encouraging teachers. This example is from Fatmah:

Raising the motivation of teachers. Incentives are important, not necessarily material, but morale, like the best teacher of the month.	رفع دافعية المعلمات. الحوافز مهمة، وليست بالضرورة مادية، بل معنوية، مثل أفضل معلمة في الشهر.

Maryam gave this reply:

A working environment that supports teachers in all aspects, provides materials, and encourages teachers to attend workshops and training.	بيئة عمل تدعم المعلمات في كافة النواحي، وتوفر المواد، وتشجع المعلمات على حضور ورش العمل والتدريب.

Moneerah added the following:

Cooperation and support in all aspects of the administration are very important if we want to	يعد التعاون والدعم في جميع جوانب الإدارة أمر مهم جدا إذا أردنا الحصول

| have high-quality interaction. Also cooperation among teachers. | على تفاعل عالي الجودة. وكذلك التعاون بين المعلمات انفسهم. |

In general, teaches' responses agreed with prior findings that a positive and stimulating work environment is essential for early childhood teachers to provide high-quality care (Cumming et al., 2021; NAEYC, 2022; OECD, 2020a).

Communication and Cooperation with Parents

Participants mentioned cooperating and communicating with parents as a factor that could improve teacher-child interaction quality, as noted by Maryam in the *pre-initiative* interview:

| Educating parents about the importance of the kindergarten stage and the importance of communicating with the teachers to encourage them to cooperate and communicate with the teachers. Parents' cooperation with the teachers plays a major role in the child's learning and development, helps him to adapt quickly in the kindergarten. | توعية أولياء الأمور بأهمية مرحلة رياض الأطفال وأهمية التواصل مع المعلمات لتشجيعهم على التعاون والتواصل مع المعلمات. يلعب تعاون الامهات مع المعلمات دوراً رئيسياً في تعلم الطفل ونموه، ويساعده على التكيف بسرعة في رياض الأطفال. |

In her *pre-initiative* interview, Reema mentioned this issue as well:

| Parents' cooperation with the teachers plays a significant role in the child's learning and development, helping him to adapt quickly in kindergarten. | يلعب تعاون أولياء الأمور مع المعلمات دوراً هاماً في تعلم الطفل ونموه، مما يساعده على التكيف بسرعة في مرحلة رياض الأطفال. |

Maryam also discussed this in her *pre-initiative* interview:

| Communicate with parents to learn more about the children's problems…situation (if he's an only | التواصل مع أولياء الأمور لمعرفة المزيد عن مشاكل الأطفال...الوضع |

| child, has a new sibling, lives with his parent or | (إذا كان طفلاً وحيداً، لديه أخ جديد، |
| one of them…) | يعيش مع والديه أو أحدهما) |

These responses were in alignment with a standard set by the NAEYC (2022) that recommends cultivating and maintaining positive relationships between teachers and families, stressing the need for ongoing communication. Halgunseth (2009) also mentioned the importance of communication with families and its impact on the child's learning and development.

Communicating effectively with parents to know each child's background, circumstances, and capabilities can help teachers interact with children more easily and effectively (Hilado et al., 2013). This characteristic was mentioned in the *pre-* and *post-initiative* focus groups and interviews. For example, Maryam said the following in the *pre-initiative* focus group:

| Communicate with parents and learn more | التواصل مع أولياء الأمور ومعرفة المزيد |
| about the children. | عن الأطفال. |

In the *post-initiative* focus group, Rana said the following:

Teachers' communication with parents, which	تواصل المعلمات مع أولياء الأمور مما يرفع
raises the quality of the interactions, to learn	من جودة التفاعل، لمعرفة المزيد عن الطفل
more about the child, his tendencies, and	وميوله واهتماماته...
interests…	

In her *post-initiative* interview, Nawal said the following:

Factors that help create opportunities to	من العوامل التي تساعد على خلق فرص
interact with children…effective	للتفاعل مع الأطفال ... التواصل الفعال مع
communication with parents…	أولياء الأمور...

In Moneerah's *post-initiative* interview, she gave a similar response:

Communicate with parents and get to know the child more and know his interests and tendencies.	التواصل مع أولياء الأمور والتعرف على الطفل أكثر ومعرفة اهتماماته وميوله

Rana also mentioned this issue in her *post-initiative* interview:

I encourage the mother to visit our class and spend some time with the children.	أشجع الأم على زيارة صفنا وقضاء بعض الوقت مع الأطفال.

Layla gave this explanation in her *post-initiative* interview:

We have the visiting mother activity…each mother can choose a day to come and do some activities with the children.	لدينا نشاط زيارة الأم... يمكن لكل أم اختيار يوم للحضور والقيام ببعض الأنشطة مع الأطفال.

In her *post-initiative* interview, Fatmah added the following:

I like when the mother tell me about her child interests, problems, education challenges, so we work together to solve them.	يعجبني عندما تخبرني الأم عن اهتمامات طفلها ومشاكله وتحديات التعليم، فنعمل معًا لحلها.

Such responses aligned with prior research (e.g., Halgunseth, 2009; Hilado et al., 2013; LaRocque et al., 2011; NAECY, 2022; Chappell & Szente, 2019).

In summary, cooperation and communication with parents are crucial for ECEC as it leads to positive outcomes, builds a supportive learning environment, and helps teachers gain valuable insights into a child's background and experiences. Teachers mentioned cooperating and communicating with parents as a factor that could improve teacher-child interaction quality. They also mentioned that effective communication with parents helped teachers interact with children more easily and effectively.

Teacher-Child Ratio

Teachers cited a high ratio of children to teachers as hindering high-quality teacher-child interaction. In support of this, studies have shown that lower child-teacher ratios may improve outcomes, reduce behavior problems, and lower rates of special education (e.g.,

Ackerman & Barnett, 2006; Pianta et al., 2005). Hessah, for example, mentioned this issue in the *pre-initiative* interview:

The biggest problem we have is the number of children, and the curriculum that we use needs to have a low ratio of children for each teacher.	أكبر مشكلة لدينا هي عدد الأطفال، والمناهج الدراسية التي نستخدمها تحتاج إلى نسبة منخفضة من الأطفال لكل معلمة.

In her *pre-initiative* interview, Fatmah highlighted the same problem:

From my point of view, the number of children in each class is a very important factor for high-quality interaction. The best number is 25 children with three teachers in a spacious classroom…high teacher-child ratio decreases the quality for sure.	من وجهة نظري، يعد عدد الأطفال في كل فصل عاملاً مهمًا جدًا للتفاعل عالي الجودة. أفضل عدد هو 25 طفلاً مع ثلاثة معلمات في فصل واسع... ارتفاع نسبة المعلمات إلى الأطفال يقلل من الجودة بالتأكيد.

Another example came from Reema's response in the *pre-initiative* focus group:

The teacher-child ratio is a very important factor…it should not exceed 12 children for each teacher…a high teacher-child ratio doesn't allow the teachers to monitor the children and help them effectively.	تعتبر نسبة المعلمات إلى الأطفال عاملاً مهم جدا... فلا تتجاوز 12 طفلاً لكل معلمة... فنسبة المعلمات إلى الأطفال المرتفعة لا تسمح للمعلمات بمراقبة الأطفال ومساعدتهم بشكل فعال.

In the *post-initiative* interviews and focus groups, there was a greater emphasis on the teacher-child ratio by all teachers as a main hindering factor, as in Maryam's *post-initiative* interview:

Reducing the number of children in class. The ratio of children to the teacher is the key to quality interaction. The lower the ratio of children to the teacher, the higher the quality of the interactions.	تقليل عدد الأطفال في الفصل. نسبة الأطفال إلى المعلمة هي مفتاح التفاعل الجيد. كلما انخفضت نسبة الأطفال إلى المعلمة، زادت جودة التفاعلات.

Nawal likewise explained how the teacher-child ratio was a major factor in interaction quality in the *post-initiative* interview:

The appropriate teacher-child ratio is the foundation of teacher-child interaction. Children have psychological, social, and emotional needs that are very difficult to meet if the number of children in the class is 30. The teacher's role in this case is to become like a policeman who monitors the psychological and physical safety of children. The appropriate ratio is 12 children for each teacher; 24 children with two teachers in the class is a perfect number. In this case, the teacher can interact with each child, listen to him, and have the time to have a good conversation with each one.	إن النسبة المناسبة بين المعلمة والطفل هي أساس التفاعل بين المعلمة والطفل. الأطفال لديهم احتياجات نفسية واجتماعية وعاطفية يصعب جدًا تلبيتها إذا كان عدد الأطفال في الفصل 30 طفلًا. ودور المعلمة في هذه الحالة هو أن يصبح مثل الشرطي الذي يراقب سلامة الأطفال النفسية والجسدية. النسبة المناسبة هي 12 طفلاً لكل معلمة؛ 24 طفلاً مع معلمتين في الفصل هو عدد مثالي. وفي هذه الحالة تستطيع المعلمة أن تتفاعل مع كل طفل ويستمع إليه ويحظى بالوقت الكافي لإجراء محادثة جيدة مع كل طفل.

This view aligned with international standards, such as the NAEYC (2022), and several studies, such as Hong et al. (2019) and Maier et al. (2020). For example, the NAEYC (2022) recommends a teacher-child ratio of 1:12 as developmentally appropriate in kindergarten classrooms and indoor settings. Studies have shown that lower class sizes and smaller teacher-child ratios improve child outcomes, reduce behavioral problems among children, lower teacher stress, and improve the teacher's experience (Schachner et al., 2016).

During the initiative, teachers appeared to be right about the impact of teacher-child ratio on interaction quality, especially if all children were present, as some classes had 28 or 30 children with two teachers. In this case, the teachers' role often became making sure that each child had something to do, with little to no opportunity for individual interaction

with children, especially outdoor time, when only one teacher would stay with the children while the other would take a break. Although recess is an important period for teacher-child interaction, individual interaction between one teacher and 28 to 30 children is almost impossible (see the subtheme on the teacher's role for examples).

Administration Requirements

In keeping with the literature (cf. Gadikowski, 2013), teachers cited the kindergarten administration's requirements as another hindering factor, especially in terms of inflexibility and required activities. As an example, in her *pre-initiative* interview, Hanan mentioned administration requirements on teachers as a hindering factor that disempowered teachers in planning and choosing activities:

Activities imposed from the administration. Sometimes I cannot change the activities, even stories that we read sometimes are determined by the administration.	فرض الأنشطة من قبل الإدارة. أحيانا ما اقدر اغير النشاط، حتى القصص الي نقراها أحيانا تكون محددة من قبل الإدارة.

Hessah also mentioned in her *pre-initiative* interview wanting teachers to have more flexibility to determine the rules in their classes, instead of those rules being imposed by the kindergarten administration:

The teacher will have the opportunity to interact with children effectively when she has the freedom and flexibility to set her classroom rules and plan activities.	المعلمة بيكون عندها الفرصة للتفاعل بفعالية لما يكون عندها حرية ومرونة في وضع قوانين الفصل وتخطيط الأنشطة.

In the *pre-initiative* interview, Hanan gave this response:

…give the teacher some power and give her the chance to make decisions about her class.	منح المعلمة بعض القوة ومنحها الفرصة لاتخاذ قرارات بشأن فصلها.

Nawal gave a similar response in the *pre-initiative* interview:

...flexibility in time, give the teacher the right to extend the time given to some activities if needed.

المرونة في الوقت، يعطي للمعلمة الحق في تمديد الوقت المخصص لبعض الأنشطة إذا لزم الأمر.

The *post-initiative* focus group saw the following exchange of views:

Layla: Time restrictions. For example, I have to adhere to the specified time for each period. Even if the children are enjoying and interested ...

Hessah: High-quality teacher-child interaction happens only when the teacher has the freedom and flexibility to set her classroom rules and plan activities.

Reema: It's not easy to interact effectively when I have time and activity restrictions.

ليلى: قيود الوقت. فمثلا يجب علي الالتزام بالوقت المحدد لكل فترة. حتى لو كان الأطفال مستمتعين بالنشاط...

حصة: التفاعل عالي الجودة بين المعلمة والطفل لا يحدث إلا عندما تتمتع المعلمة بالحرية والمرونة في وضع قواعد الفصل الدراسي وتخطيط الأنشطة.

ريما: ليس من السهل التفاعل بفعالية عندما يكون الوقت ونوع النشاط مفروضين من الإدارة.

Layla's response about time restrictions contrasted with the flexibility that teachers mentioned as an enabling factor. This agreed with the NAEYC's (2022) assertion that the daily schedule should be predictable yet responsive to individual needs. However, policymakers vary in how much power they give teachers to make activities or deviate from the curriculum (OECD, 2021). As mentioned earlier under Theme 2, planning activities based on children's interests is an aspect of high-quality teacher interaction that cannot happen effectively if the administration fails to empower teachers and give them some freedom and flexibility.

Summary of Theme 5

This theme presented teachers' perspectives about factors affecting teacher-child interaction quality, focusing on the five targeted in the initiative. Of these, they reported teacher-child ratio and administration requirements as the most important. These findings

were related to Research Question, which focused on the perceived factors affecting teacher-child interaction quality.

Theme 6: Teachers' Reflections and Learning from the Initiative

Under this theme, I discuss the findings on what teachers learned and implemented from the initiative and their key takeaways from it.

What Teachers Learned and Implemented

All teachers agreed that this was their first time to receive professional development on teacher-child interaction quality. In the beginning of the study, teachers were wondering what I meant by "teacher-child interaction quality" and asked me to clarify it. However, they became more fluent and specific in their answers after the initiative. For example, Fatmah's responses about teacher-child interaction quality characteristics were longer and more detailed. In the *pre-initiative* interview, Fatmah said the following:

High-quality teacher child interaction means high professionalism, enjoy working with children, children are engaged and interested in activities, the teacher is always with the children all the time, she is full of energy and vitality, and the environment is constantly renewed because children get bored quickly.	تفاعل المعلمة مع الطفل عالي الجودة يعني مهنية عالية، الاستمتاع بالعمل مع الأطفال، الأطفال منخرطون ومهتمون بالأنشطة، المعلمة تكون دائماً مع الأطفال طوال الوقت، فهي مليئة بالطاقة والحيوية، والبيئة تتجدد باستمرار لأن الأطفال يشعرون بالملل بسرعة.

However, in the *post-initiative* interview, Fatmah's response had much more details, and she was more fluent in her answers about interaction quality characteristics. Below are highlights from her response:

- The teacher's questions and activities help the child to learn, all of them appropriate to the child's age, level of knowledge, and what he wants to learn and what he can learn.	ـ أسئلة وأنشطة المعلمة تساعد الطفل يتعلم، كلها مناسبة لعمر الطفل ومستوى معرفته وما يريد أن يتعلمه وما يمكن أن يتعلمه.

- The learning environment is very well prepared to create the perfect atmosphere for high-quality teacher-child interaction.	ـ بيئة التعلم معدة بشكل جيد للغاية لخلق جو مثالي للتفاعل بجودة عالية بين المعلم والطفل.

Fatmah mentioned several components of high-quality teacher-child interaction, reflecting ideas from the workshops. The first was the ZPD, the difference between what a child can do with and without assistance from more capable peers or adults (Rogoff, 2003). This concept was discussed several times during the workshops to clarify to the teachers that their interaction was very important for children's learning and development. Setting up the learning environment is not enough, as the teacher's interaction can move the child to another level of learning. Another component that Fatmah mentioned is the importance of learning environment in supporting high-quality teacher-child interaction, aligning with previous studies (e.g., Burchinal et al., 2015; Soliday Hong et al., 2019; Touhill, 2017).

Fatmah's views were echoed by most teachers when describing characteristics of high-quality interaction in the *post-initiative* interviews. Other teachers highlighted a shift in their thinking about early education quality in general and teacher-child interaction quality in particular. For example, some mentioned in the *post-initiative* interviews that they had started viewing their role as a key factor in early education quality, as exemplified by Hanan:

This continuing professional development gave me confidence in my practice. I realized that my role as a teacher is the most important component of early childhood education quality.	اعطتني هذه الدورة الثقة في ما افعله. ادركت بان دوري كمعلمة هو الأهم في جودة تعليم الطفولة المبكرة.

Layla also mentioned a change in her understanding of early education quality:

This course clarified to me what quality in early childhood education means. I had a misunderstanding about quality…now I know	وضحت لي هذه الدورة ما تعنيه الجودة في التعليم في مرحلة الطفولة المبكرة. كان لدي سوء فهم بشأن الجودة... والآن أعرف مدى

how important my role is and how it is the core of early childhood education.

<div dir="rtl">أهمية دوري وكيف أنه اساس التعليم في مرحلة الطفولة المبكرة.</div>

Hanan and Layla's responses show that after the initiative, they become aware of the importance of teacher-child interaction quality as a key factor in ECEC quality, which has been widely acknowledged in studies such as Burchinal et al. (2010) and Hamre and Pianta (2007).

In her *post-initiative* interview, Moneerah likewise showed a change in perspective regarding high-quality teacher-child interaction, describing it as bidirectional. In the *pre-initiative* interview, she focused on the teacher:

The teacher's language is very important… gestures and body language are important too… knowing enough information about any activity she presents, preparing the tools and materials.

<div dir="rtl">لغة المعلمة مهمة جداً... والإيماءات ولغة الجسد مهمة أيضاً... معرفة المعلومات الكافية عن أي نشاط تقدمه، وإعداد الأدوات والمواد.</div>

In contrast, she gave this response in the *post-initiative* interview:

High-quality interaction between teacher and child as a bidirectional interaction, through the whole day…purposeful interaction supports the child's learning and development…positive and encouraging environment that supports children's learning and development.

<div dir="rtl">التفاعل عالي الجودة بين المعلم والطفل هو تفاعل ثنائي الاتجاه، طوال اليوم، تفاعل هادف يدعم تعلم الطفل ونموه...بيئة إيجابية ومشجعة تدعم تعلم الطفل ونموه.</div>

This response was close to Hamre et al.'s (2012) definition of teacher-child interaction as sensitive daily social and instructional exchanges within a positive environment or Hoang et al.'s (2018) definition of high-quality teaching as a socially interactive process.

In the *post-initiative* focus group, teachers similarly mentioned changes in their perspectives on self-learning and their role. This followed the growing push for teachers to

integrate traditional beliefs about play with new insights into the role of social interactions, modeling, and relationships in children's learning (Edwards, 2017).

Based on the observations, discussions with teachers after the observations, and *post-initiative* interviews and focus group, teachers generally showed a desire to develop the quality of their interaction with children. However, some factors were constraining them. The main factor according to them was the teacher-child ratio.

In the *post-initiative* focus group, I asked the teachers the following question: "Based on the individual interviews, almost all of you agree that the large number of children in the class affects the quality of teacher-child interaction. What solution do you have for this problem based on what we have discussed during the workshops?" This question was asked to help the teachers think about and implement what they learned during the initiative and to wrap up the initiative with ideas they could use going forward. They gave several practical solutions:

[Rana:] Divide the children into groups; divide the children into two groups, each group with a teacher, so the teacher can focus on interacting with a smaller number of children, dividing tasks between teachers.	رنا: تقسيّم الأطفال إلى مجموعات؛ تقسيم الأطفال إلى مجموعتين، كل مجموعة مع معلمة، حتى تتمكن المعلمة من التركيز على التفاعل مع عدد أقل من الأطفال، وتقسيم المهام بين المعلمتين.
[Reema:] Increasing the number of children allowed to enter some attractive corners, the activities that attract children such as art and Play-Doh. Some corners are like magnets for children, such as art, water, and sand, so increase the number of children allowed to enter these educational corners.	ريما: زيادة عدد الأطفال المسموح لهم بدخول بعض الأركان الجذابة، والأنشطة التي تجذب الأطفال مثل الفن والصلصال. بعض الاركان كأنها مغناطيس للأطفال، مثل الفن والماء والرمل، لذلك زيادة عدد الأطفال المسموح لهم بدخول هذه الاركان.

Rana's response reflected her understanding of the importance of teacher-child interaction by trying to find ways to facilitate interaction with children even if the teacher-child ratio was high. This contrasted with the dominant belief among teachers before the professional development about preparing the learning environment for self-learning. Reema's response showed her consideration of children's interests as a solution to the teacher-child ratio issue. This would align with Touhill (2012b), who stated that children learn best when they are interested and engaged.

Other solutions were related directly to workshop content and discussions. For example, Layla suggested using sustained-shared thinking and discussion strategies, while Moneerah, Hessah, Nawal, and Maryam suggested implementing AnjiPlay:

[Layla:] Sustained shared thinking can be used with big groups effectively, discussing with the children and planning activities together.	ليلى: يمكن استخدام التفكير المشترك المستدام مع المجموعات الكبيرة بشكل فعال، والمناقشة مع الأطفال والتخطيط للأنشطة معًا.
[Moneerah:] AnjiPlay is a wonderful way to interact with children and I hope to implement some of the AnjiPlay activities in our kindergarten; we told the principal about some ideas that we derived from AnjiPlay. The videos in general were very inspiring, wonderful, and rich. The tools and materials were simple in the videos, but the interaction was great.	منيرة: انجي بلاي هي طريقة رائعة للتفاعل مع الأطفال وأتمنى تنفيذ بعض أنشطتها في روضتنا؛ قلنا للمديرة عن بعض الأفكار من الفيديوهات بشكل عام كانت ملهمة ورائعة وغنية جدًا. الأدوات والمواد كانت بسيطة في الفيديوهات، لكن التفاعل كان رائعاً.
[Hessah:] The children were enjoying and busy with the activities. Although there were many children, there was cooperation between them. I remember some children were building	حصة: كان الأطفال مستمتعين ومنشغلين بالأنشطة. ورغم أن هناك العديد من الأطفال، إلا أنه كان هناك تعاون بينهم. أتذكر أن بعض

blocks in small groups with amazing cooperation.	الأطفال كانوا يبنون بالمكعبات في مجموعات صغيرة بتعاون رائع.
[Nawal:] I wish we could implement AnjiPlay here in our kindergarten. We want you to explain it to our principal. Perhaps she'll implement it.	نوال: أتمنى أن نتمكن من تطبيق انجي بلاي هنا في الروضة. نبغاك تشرحين لمديرتنا. يمكن تطبقها.
[Maryam:] I think we as teachers will enjoy implementing it too.	مريم: أعتقد احنا كمعلمات بنستمتع بعد.

Layla explicitly mentioned two strategies that the initiative focused on (sustained shared thinking and discussion) that could be used with large classes. Professional development that helps teachers learn high-quality interaction strategies has been particularly successful (Brunsek et al., 2020).

Teacher responses in the *post-initiative* focus group emphasized that AnjiPlay could be a solution to high teacher-child ratios. AnjiPlay videos were presented in the learning environment workshop, and the teachers were impressed by it and discussed how they could implement it. Although AnjiPlay is risky play and teachers emphasized the importance of their role as monitors to ensure children's safety, they liked AnjiPlay and wanted to implement some of this approach in their kindergarten.

These changes in teachers' perspectives were aligned with several studies that noted how professional development can change teachers' knowledge, practices, and beliefs (e.g., Breffni, 2011; Hamre et al., 2012). I likewise observed teachers in this study having better interactions with children.

Key Takeaways

Each of the teachers reported what they considered to be the highlight of the initiative, i.e., their key takeaways. For example, Rana mentioned a key takeaway for her was about the self-learning principle:

Over-relying on the concept of self-learning is not beneficial for children. The child needs the teacher to interact with him in order to learn, develop his learning, to move from the current level to a higher level of learning. The teacher is the one who predicts this level based on the child's abilities.	المبالغة في الاعتماد على مفهوم التعلم الذاتي ليس مفيداً للأطفال. يحتاج الطفل إلى تفاعل المعلمة معه حتى يتعلم، ويطور تعلمه، لينتقل من المستوى الحالي إلى مستوى أعلى من التعلم. والمعلمة هي من تتنبأ بهذا المستوى بناء على قدرات الطفل.

Rana's response reflected an understanding of the importance of teacher-child interaction, the ZPD, and the teacher's role in supporting children's development. I noted during my observation how Rana tried to interact with children in several corners. As an example from the last day of observation in Week 12 in the Bees class, Rana interacted with children in several corners, mainly in the dramatic play and art corners, asked open-ended questions, and gave feedback. Below is an example from the dramatic play corner:

Rana: How did you bake this cake? It looks delicious.	رنا: كيف سويتي هاذي الكيكة؟ شكلها لذيذة.
Taleen: I mixed it then I put it in the oven. Be careful, it's hot!	تالين: خلطتها بعدين دخلتها الفرن. انتبهي، تراها حارة!
Rana: What else can we make for the tea party?	رنا: ايش ممكن نسوي بعد لحفلة الشاي؟

Some teachers highlighted interaction strategies as a key takeaway from the initiative, such as Reema, who mentioned open-ended questions and feedback:

Open-ended questions are not as easy as it seems and require training and experience, effective feedback as well. It's not easy to give good feedback.	الأسئلة المفتوحة ليست سهلة وتتطلب تدريبًا وخبرة وتغذية راجعه فعالة أيضًا. مو من السهل إعطاء تغذية راجعة جيدة.

Reema said that feedback was not easy, and she needed practice (cf. Shin et al., 2007).

Reema also said that asking questions was not easy for her and that she needed practice in

that regard as well, aligning with Murray (2022). During my observations, Reema struggled with giving feedback and asking open-ended questions. For example, in Week 12 in the Bees class, Reema was still asking more closed-ended questions:

Reema: What colors did you use?	ريما: ما هي الألوان التي استخدمتها؟
Adnan: Blue and yellow.	عدنان: الأزرق والأصفر.
Reema: What is this shape?	ريما: ما هذا الشكل؟
Adnan: Square?	عدنان : مربع ؟
Reema: It's rectangular.	ريما: مستطيل.

Fatmah's key takeaway was also mainly related to feedback:

Feedback is an important strategy…immediate …clear and specific sentences…to help the child stay interested and keep doing the activity …stay away from words like "great" and "good job" as much as you can…describing what the child did is better…let him know what good things he did.	التغذية الراجعة استراتيجية مهمة ... فورية... جمل واضحة و محددة ... لمساعدة الطفل يبقى مهتم ويكمل بالنشاط...الابتعاد عن كلمات مثل "رائع" و"احسنت...وصف ما فعله الطفل أفضل...أخبره بالأشياء الجيدة التي قام بها فعل.

Her response reflected several ideas discussed in the workshops that aligned with Dunlap et al. (2007) and MacNaughton and Williams (2008), who stated that effective feedback is clear, immediate, and describes the effort rather than evaluating it.

Nawal, Hessah, and Maryam mentioned problem-solving as a key takeaway. Nawal gave this response:

Give the child a chance to explain the problem in his own words and express himself.	اعطي الطفل فرصة لشرح المشكلة بكلماته والتعبير عن نفسه.

Hessah suggested giving clues for how to deal with a problem:

Give the child hints to solve the problem if he doesn't know the solution to the problem.	إعطاء الطفل تلميحات لحل المشكلة إذا كان لا يعرف حل المشكلة

Maryam focused on emotions and feelings in solving problems:

Solving problems involves emotions. I am always supposed to help the child understand and control his feelings so that he can focus on how to solve the problem. Sometimes we just focus on solving the problem. We have to take advantage of the situation and teach the children how to understand their feelings…Stories and reading can help children understand their feelings.	حل المشاكل ينطوي على العواطف. والمفروض دائماً أن أساعد الطفل على فهم مشاعره والسيطرة عليها حتى يتمكن من التركيز على كيفية حل المشكلة. في بعض الأحيان نركز فقط على حل المشكلة. علينا استغلال الموقف وتعليم الأطفال كيف يفهمون مشاعرهم... القصص والقراءة ممكن تساعد الأطفال يفهمون مشاعرهم.

These examples aligned with strategies discussed in the problem-solving workshop, including giving children opportunities to solve problems, giving them clues, and acknowledging their feelings. They also aligned with the literature (Kook, 2023; MacNaughton & Williams, 2008). During the observations, I noticed that teachers tried to implement these strategies (for examples, see Theme 2).

Layla's key takeaway focused on flexibility:

Flexibility in choosing activities based on children's interests and questions is very important, and I hope we can apply it because children enjoy, learn, and benefit more when they plan the activities.	المرونة في اختيار الأنشطة بناءً على اهتمامات الأطفال وأسئلتهم مهمة جدًا، وأتمنى أن نطبقها لأن الأطفال يستمتعون ويتعلمون ويستفيدون أكثر عندما يخططون للأنشطة.

Giving teachers more flexibility to select and plan activities according to what interests children in order to extend their learning and development is an important aspect of high-quality ECEC (Copple & Bredekamp, 2009; Hedges et al., 2011). Layla's response was related to a discussion in the workshop based on an article they read beforehand and some videos we watched and discussed as a group. However, based on my observations, planning activities according to children's interests was challenging as the kindergarten

gave teachers limited flexibility in this respect, with most activities planned by the administration. Similarly, Hanan's key takeaway was sustained shared thinking, which she was hoping to implement more often:

Sustained-shared thinking. I hope we get more chances to implement it. Children learn ideas from each other and build on each other's ideas. They work as a team to plan and implement activities or even to understand some concepts and situations…	التفكير المشترك المستدام. وآمل أن نحصل على المزيد من الفرص لتنفيذه. يتعلم الأطفال الأفكار من بعضهم البعض ويبنون على أفكار بعضهم البعض. يعملون كفريق واحد لتخطيط وتنفيذ الأنشطة أو حتى لفهم بعض المفاهيم والمواقف...

Overall, the key takeaways teachers reported were mainly related to the interaction strategies presented in the workshops, in addition to the development in their understanding of self-learning. However, two of the main points they agreed on were not main components of the workshops. These were encouraging children to complete their work (teaching them perseverance and determination) and AnjiPlay. The latter was mentioned, for example, in the *post-initiative* focus group:

Moneerah: I think AnjiPlay is one of the highlights of this initiative as we mentioned it is suitable to be used with big classes… Layla: I agree with Moneerah…	منيرة: أعتقد أن انجي بلاي من أبرز الأشياء في هذه المبادرة زي ماقلنا أنها مناسبة للاستخدام مع الفصول الكبيرة... ليلى: أتفق مع منيرة..

Teachers generally reported liking the initiative and even recommended having it again for teachers in the kindergarten who had not participated, as Hessah mentioned in the *post-initiative* focus group:

I liked the initiative. I think many kindergartens need it to improve the quality of interaction. I recommend that you repeat the workshops for the teachers who didn't participate.	أعجبتني المبادرة. أعتقد أن العديد من الروضات تحتاج لها لتحسين جودة التفاعل. أنصح بإعادة ورش العمل للمعلمات الي ما شاركو.

After each workshop, I used the Vevox website to ask teachers for their assessment of it, including any comments and suggestions to improve workshops in the future. For example, they mentioned the following (Vevox did not show participants' names):

- I liked that you mainly let us discuss and participate.	ـ أعجبني أنك سمحت لنا بالمناقشة والمشاركة بشكل أساسي.
- The practical examples of the strategies are helpful and give me ideas for how I can implement the strategies in my class.	ـ الأمثلة العملية لتطبيق الاستراتيجيات مفيدة وتعطيني أفكارًا حول كيفية تنفيذ الاستراتيجيات في فصلي.
- Videos were very interesting and show us different examples from around the world.	ـ مقاطع الفيديو كانت مميزه ورتنا أمثلة مختلفة من جميع أنحاء العالم.

The comments mainly revolved around whether they liked the workshops based on the discussion, videos, and practical examples. Video methods (video discussion) utilize tenets of high-quality professional development (such as modeling, scaffolding, and situated learning); they are also related to desired outcomes, such as applying new ideas to teaching practices (Arya et al., 2015; Christ et al., 2014; Van Es & Sherin, 2010). According to Rubio-Alcalá et al. (2020), discussion and videos are effective components of teacher training (see the areas of development subtheme for more details). In nearly all feedback received through Vevox, teachers mentioned liking the videos and learning from them, as discussed under "areas of development" below.

Face to face vs. online workshops. Teachers had different opinions about the workshop delivery methods of the professional development. For example, in the *post-initiative* interview, Layla noted that she preferred face-to-face workshops, as the workshops were half online and half face-to-face:

The initiative was excellent. It would be better if the workshops were all face-to-face discussions. It would be better if the workshops were weekly.	المبادرة كانت ممتازة. من الأفضل لو كانت ورش العمل عبارة عن مناقشات وجهاً لوجه. وسيكون من الأفضل لو كانت

Visits [discussion] after the workshops are good, to confirm what we have learned during the workshops.	الورش أسبوعية. الزيارات [المناقشة] بعد ورش العمل جيدة، لتأكيد ما تعلمناه خلال ورش العمل.

Hanan's response in the *post-interview* agreed with Layla:

Face-to-face workshops I think are more effective. The videos were very interesting and beneficial.	أعتقد أن ورش العمل وجهاً لوجه فعالة اكثر. وكانت مقاطع الفيديو مثيرة للاهتمام ومفيدة للغاية.

Layla and Hessah's perspective aligned with Delifino and Persico (2007) that some teachers—when given the chance to choose between different modalities of professional development, such as face-to-face, online, and blended workshops—prefer face-to-face workshops.

In contrast, Moneerah and Maryam said in the *post-initiative* focus group that they saw no major differences between face-to-face and online workshops:

[Moneerah:] It doesn't matter whether online or face-to-face. The most important thing is the content of the workshop and the discussion.	منيرة: لا يهم سواء عن بعد أو وجهًا لوجه. والأهم هو محتوى الورشة والمناقشة.
[Maryam:] I like the blend between online workshops and face-to-face. In general I don't see a big difference between them.	مريم: حبيت المزج بين ورش العمل عن بعد وورش العمل وجهًا لوجه. على العموم ما اشوف فرق كبير بينهم.

These responses aligned with Fishman et al.'s (2013) finding that teachers and students exhibited significant gains in both online and face-to-face modalities, with no significant difference between them.

Although teachers reported varying perceptions about the workshop methods, they emphasized certain advantages of the initiative, which are discussed along with cons in the next section.

Pros and cons of the initiative. This subtheme presents the pros and cons of the initiative according to the teachers. They mentioned several positive points, such as using videos during the workshops to present different examples around the world of high-quality teacher-child interaction. For example, this was Hanan's response in the *post-initiative* interview:

The videos were very interesting and beneficial.	الفديوات كانت جدا ممتعة ومفيدة.

Most of the teachers' responses agreed with Hanan about using videos in the initiative, as Moneerah noted in the *post-initiative* interview:

The workshops were useful. Your comments after the visits were good and helpful. The content of the workshops was integrated and practical. Questions, discussions, and videos made it easier to understand and benefit from the content…	كانت ورش العمل مفيدة. تعليقاتك بعد الزيارات كانت جيدة ومفيدة. وكان محتوى ورش العمل متكاملاً وعملياً. الأسئلة والمناقشات والفيديوهات جعلت من السهل فهم المحتوى والاستفادة منه...

Teachers in the *post-initiative* focus group mentioned similar points and added some others:

[Layla:] Everything was clear. In each workshop, you tell us what we are going to learn…you clarify the importance of what we are learning and how we going to benefit from it and how we can implement it…The videos show us how high-quality kindergartens around the world are.	ليلى: كل شيء كان واضحا. في كل ورشة تخبرينا بما سنتعلمه...توضحين لنا أهمية ما نتعلمه وكيف سنستفيد منه وكيف يمكننا تنفيذه الفديوات تورينا كيف الروضات الي فيها جودة من جميع أنحاء العالم العالم.
[Rana:] I like the discussion about the videos and getting chance to exchanging experiences.	رنا: أحب النقاش حول الفديوات وتفتح مجال لتبادل الخبرات.

Layla's response agreed with Darling-Hammond (2017) and Garet et al. (2001) about how clear learning objectives, opportunities for collaborative learning and discussion, follow-up support, and resources are all characteristics of good professional development. Layla and Rana were examples of teachers who liked the videos as a way of learning through discussion. Video-based professional development helps teachers improve their classroom practices by providing them with concrete examples of effective teaching strategies; videos can promote a shared understanding of effective teaching practices among teachers, as they can watch and discuss videos together and learn from each other's perspectives (Sherin & Han, 2004). Major and Watson (2018) also noted that videos can be a valuable tool for in-service teacher professional development. Clear learning objectives, opportunities for collaborative learning and discussion, follow-up support, and resources are all characteristics of good professional development (Darling-Hammond, 2017; Garet et al., 2001).

One of the main pros of this professional development mentioned several times early on and in every feedback on Vevox was using videos to represent high-quality teacher-child interaction from real ECEC settings around the world. In terms of technology, videos are best leveraged as part of professional development that contains other features as well (DeMonte, 2013). DeMonte (2013) used videos to provide high-quality professional development courses that brought teachers from several locations together to develop their practices by watching educational videos, discussing best practices, and analyzing curriculum for the best ways to integrate it into the classroom.

Fatmah mentioned the handouts as another positive:

The articles and handouts you gave us before the workshops were good too and the activities in the beginning of the workshops such common things between us (it was icebreaking activity).	فاطمة: المقالات والنشرات التي قدمتيها لنا قبل ورش العمل كانت جيدة أيضًا والأنشطة بداية الورش مثل الصفات المشركة للقروب.

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Having access to handouts during lectures is associated with several benefits. It allows for less notetaking; therefore, learners have more time to listen and think during a lecture (Wood, 2003). It also organizes, supports, expands on, provides resources, or provides follow-up to training (Sakraida et al., 2005). In addition, Fatmah mentioned the icebreaker activities, which can increase motivation and make learning more effective (Kasimova, 2022).

Nawal and Rana stated that job-embedded professional development was a better model but added comments related to reflection, feedback, communication, and using digital technology:

[Nawal:] The presence of the trainer in the kindergarten is something new for us and her knowledge of the kindergarten systems... Sometimes the individual discussions with the trainer draws my attention to something that I did not pay attention to or makes me think of developing my interaction through her suggestions.	نوال : وجود المدربة بالروضة وهو شي جديد بالنسبة لنا ومعرفتها بأنظمة الروضة... المناقشة أحيانا مع المدربة تلفت نظري لشي مانتبهت له او تخليني افكر اطور تفاعلي من خلال الاقتراحات.
[Rana:] I agree, it is better to be in the kindergarten…communication between the trainer and the teachers is necessary, face-to-face in the kindergarten to discuss our practice and implement what we learn, and via WhatsApp... like what you did sending articles, handouts, and videos and we discuss them.	رنا: اتفق، الأفضل انها تكون بنفس الروضة... التواصل بين المدربة والمعلمات ضروري في الروضة وجها لوجه نناقش اداءنا والي تعلمناه ونطبقه بالواقع...و مثلا بالوتس اب زي لما كنتي ترسلين المقالات والنشرات والفديوات ونتناقش فيها.

Nawal and Rana's responses were related to reflection and feedback that the trainer (i.e., mentor) could provide in job-embedded professional development. They also

mentioned the importance of discussion with the mentor, while Layla mentioned discussion with collogues and exchanging experiences:

Discussing with the teachers and exchanging experiences in the workshops is useful. I got to know a lot of things my colleagues do in the other classes that I did not know.	ليلى: المناقشة مع المعلمات وتبادل الخبرات بالورش مفيدة... تعرفت على أشياء كثير يفعلونها زميلاتي بالفصول الثانية ماكنت اعرفها.

Layla highlighted the common challenge of a lack of opportunities to learn from colleagues in a supportive, collegial setting structured for showcasing excellent practices. Many professional development designs that show improvement in teaching and learning contain some kind of collaboration among teachers in a school (DeMonte, 2013; Guskey, 2003; Kennedy, 2014; Smith, 2012). On a related note, trainers who conduct the workshop could return for feedback or follow-up (Hill, 2009). Similarly, Smith (2012) recommended giving feedback to teachers on their practices to increase the chances of a deeper understanding that helps teachers improve. Teachers' expertise can also be developed through feedback and reflection within a professional learning environment (Daniel et al., 2013).

Rana's response highlighted the importance of communicating through tools such as WhatsApp to discuss or share videos, handouts, and articles. This aligned with the literature claiming that high-quality professional development offers a place where teachers can discuss their thoughts and work together as part of a learning community and that WhatsApp can offer an online professional learning community for this purpose (Cansoy, 2017; Moodley, 2019). Although WhatsApp had been planned as an active learning tool, I noticed that teachers in the WhatsApp group were not very active in participating in discussions and limited discussions regarding learning happened in the group. However, teachers paid attention to resources sent via WhatsApp and discussed them in the workshops.

Regarding teachers' perceived cons of the initiative, prominent ones mentioned in the *post-initiative* focus group included duration of the professional development, time between workshops, length of the workshops, and using WhatsApp, as illustrated by Reema and Fatmah:

[Reema:] A long program is better, in the same kindergarten that focuses on a specific aspect, such as children's development and strategies…held every week for example, so we apply what we learned and discuss it with the trainer…Also, workshops need to be not too long, two hours max…focus on practical things.	ريما: البرامج الطويلة وتكون بنفس الروضة، يكون فيها تركيز على جانب معين نمو الطفل والاستراتيجيات... وتكون ورش بينها مثلا أسبوع عشان نطبق الي تعلمناه ونراجع مع المدربة... أيضا الورش لازم ماتكون طويلة ساعتين بالكثير... وتركز على ممارسات عملية.
[Fatmah:] It is better to hold the program in the same kindergarten, being close to the trainer makes us feel that you understand our work and the problems we face so that the suggestions are suitable for us.	فاطمة: اقامة البرنامج في الروضة افضل... قرب المدربة يحسسنا انك فاهمة شغلنا ومشاكلنا الي نواجهها حتى الاقتراحات تكون مناسبة لنا.

The teachers mentioned important characteristics of effective professional development highlighted in the literature. For example, studies have found that when professional development programs consisting of a single event are replaced by longer-term designs that focus on developing practices, teachers will more likely improve their practices (Jerald, 2012). Furthermore, professional development should be embedded in the job, enhance teachers' knowledge about children's development, and inspire teachers to reflect on their teaching (Guskey, 2003; Kennedy, 2014; Smith, 2012). In addition, it should emphasize core content and modeling of pedagogical strategies and offer teachers opportunities to actively learn new strategies (DeMonte, 2013). Fatmah's response was also related to DeMonte's (2013) claim that school context should be a key concern and

that effective professional development is connected to the needs of different teachers, schools, and areas. The closeness of the trainer (mentor) offers the opportunity to understand the kindergarten context.

Several other cons pointed out in the *post-initiative* focus group are listed below:

[Layla:] We were under time pressure sometimes and I wish the workshops were in the summer.	ليلى: كنا نتعرض لضغط الوقت أحياناً وأتمنى لو كانت الورش في الصيف.
[Hessah:] Sometimes I didn't find time to read the articles you sent.	حصة: في بعض الأحيان ماكنت القى الوقت لقراءة المقالات الي ترسلينها.
[Nawal:] I wish you show us some videos from a high-quality Saudi kindergarten.	نوال: أتمنى لو عرضتي لنا بعض الفيديوهات من روضة أطفال سعودية فيها جودة عالية.
[Hanan:] I wish you could give us a training certificate from the Ministry of Education.	حنان: ياليت لو كان على الدورة شهادة تدريب من وزارة التربية والتعليم

Many of the cons teachers listed were not directly related to the initiative. For example, offering the course in the summer would not be doable because the professional development was meant to be job-embedded to develop teachers' practices by offering feedback, reflection, and the chance to implement the strategies and discuss the implementation. Hessah mentioned not finding time to read some articles, but we discussed the articles as a group in the beginning of each workshop, which gave her the most important points of the article even if she had not read it. Nawal mentioned the lack of Saudi videos, but the researcher did not have the time or skills to create such videos, which need to be done at an institution level, such as SIREN Films, which was used as a resource for several videos presented to the teachers during the initiative. Regarding Hanan's point, DCU provided a participation certificate, but the Ministry of Education needs a long time to study the initiative to consider whether they can give a certificate for it.

Summary of Theme 6

This theme addressed the findings on professional development under two subthemes. The first was what teachers learned and implemented from the initiative. By the end of the initiative, the teachers had become more fluent and specific in their answers about teacher-child interaction quality, showing development in their understanding regarding ECEC quality in general and teacher-child interaction quality in particular. They also emphasized their role in achieving ECEC quality and showed development in their understanding of the self-learning curriculum and the interaction strategies the professional development introduced (e.g., discussion, sustained shared thinking, and AnjiPlay) by implementing them to address the high teacher-child ratio. Although AnjiPlay went against their view of their role in monitoring children (see supervision section), they wanted to implement it in the kindergarten.

The second subtheme consisted of teachers' opinions about the initiative. In general, they gave very positive feedback and showed changes in their perspectives on the importance of teacher-child interaction quality and their role as teachers; however, they still needed further development. Nevertheless, the amount of change observed was reasonable considering the short period of implementation and the initiative occurring immediately after children and teachers had returned to in-person classes after the COVID-19 pandemic.

This theme addressed Research Questions 1 and 2 by showing how the teachers perceived their practices before and after the initiative. It also addressed Research Question 5 regarding how the teachers perceived the initiative as a tool to develop teacher-child interaction quality.

Reflection

As an insider researcher, I had a close connection and personal involvement with the subject (Merton, 1972). I was aware that self-reflection and a reflexive approach were

necessary ongoing processes to identify my positionality. As such, I tried to acknowledge myself in the research, seeking to understand my part in it (May & Perry, 2017).

During the initiative, I made a conscious effort to be aware of my views and positions and how they could have directly or indirectly influenced the findings (May & Perry, 2017). As a qualitative researcher, I aimed to ensure that my prior experiences, assumptions, and beliefs did not directly or indirectly influence the research process, analysis or findings (May & Perry, 2017).

As a reflexive qualitative researcher, I frequently asked myself whether my personal views could be leading me to a preconceived conclusion. Some of the findings contradicted my initial beliefs, which suggested I was being objective during the study. For example, drawing on my experience as a kindergarten teacher and supervisor for undergraduate students during their practicum, I initially doubted whether the initiative could change teachers' perspectives on the self-learning curriculum's emphasis on free play with minimal interference from teachers, especially during the corners period. However, teachers expressed their interest in participating more in children's play without feeling they were interrupting or disturbing the children. They also suggested that this interaction would lead to better learning experiences. In several cases, I observed teachers eagerly waiting for the chance to guide children's play in a way that supported or expanded learning.

As another example, I learned how challenging it is in practice to implement appropriate classroom interactions. A teacher clarified to me that it is not always easy to ask open-ended questions or provide effective feedback. I agreed with her, despite my initial perspective that as long as the teacher had the intention to ask open-ended questions or give feedback that supported learning during activities, it would be easy for them. I also sometimes struggled to ask children meaningful questions and needed to ask the teachers for help.

My previous readings on this study's topic were all in English and focused on international literature, and my experience in the U.S. shaped my understanding of ECEC quality, including teacher-child interaction. However, through my experience and close observation of Saudi teachers' practices, I had to reassess my understanding of teacher-child interaction quality and the factors that can influence it in the Saudi context. Additionally, I gained insights into how professional development can contribute to teacher-child interaction quality in Saudi Arabia. For example, the teachers mentioned several factors that affect the quality of interaction with children. Through my presence with them during the initiative, I directly observed the impact of these factors. One of the most highlighted was the ratio of children to teachers. I personally witnessed the difficulty of interacting with a large number of children, as the teacher could barely monitor them, especially during outdoor playtime where there was only one teacher for 28–30 children. Some teachers expressed their relief on the days when I attended and engaged in activities with the children, noting that they interacted better when the ratio of children was lower during my presence as an assistant teacher.

Finally, I am glad I used the ABC LD model to design the initiative. It proved to be very helpful as it provided a structured framework that allowed for easy design, implementation, and modification based on the teachers' knowledge and needs.

To me, the highlight of this initiative was realizing the importance of tailoring professional development to meet the specific context of each group of teachers. It became evident that a "sit and get" approach, where teachers passively receive information, does not effectively develop their teaching practices. Instead, it is crucial to consider the kindergarten context and teachers' individual needs to provide them with opportunities for active engagement and practical application of the strategies. This approach ensures that the initiative is meaningful and leads to development in teacher-child interaction.

Chapter Summary

In this chapter, I discussed the themes and subthemes that were generated from the data (see Table 4.2). The first theme was the implementation of the self-learning curriculum. The second theme was play-based learning and intentionality, which encompassed questioning, feedback, discussion, problem-solving, sustained shared thinking, planning activities based on children's interests, and encouraging children to complete their work (perseverance and persistence). The third theme was teachers' perspectives on their role in supporting children's learning and development, including supervising, facilitating friendship, behavior management, and supporting language development. The fourth theme was the learning environment, which was broken down into the impact of the environment; cognitively, socially, and emotionally supportive environments; characteristics of a good learning environment, and the outdoor learning environment. The fifth theme consisted of factors affecting teacher-child interaction quality, including professional development, working conditions, communication and cooperation with parents, teacher-child ratio, and administration requirements. The sixth theme was the teachers' reflections on the initiative, covering what teachers learned and implemented as well as their key takeaways. Together, these themes helped answer the research questions.

Regarding the first research question (How do teachers perceive their practices related to teacher-child interaction quality before the professional development initiative?), the teachers reportedly viewed their roles as monitoring, solving behavioral problems, facilitating friendship, and supporting language development, following their understanding of the self-learning curriculum. They struggled before the initiative to describe the five interaction strategies targeted in the study.

Regarding the second research question (How do teachers perceive their practices related to teacher-child interaction quality after the professional development initiative?), teachers showed changes in their understanding of the self-learning curriculum. By the end

of the initiative, they reported trying to have more teacher-guided activities with children in the learning corners using the five interaction strategies introduced in the workshops. They were also more fluent and specific in their answers about those strategies than at the beginning of the study.

Regarding the third research question (Have any changes emerged in teachers' pedagogical strategies as a result of the professional development initiative?), the reported changes in the teachers' perspectives were largely apparent in practice during the classroom observations.

Regarding the fourth research question (What factors enable or constrain quality interactions according to teachers?), the teachers reported teacher-child ratio and administration requirements as the most important factors constraining their interactions with children. They mentioned the learning environment, communication and cooperation with parents, working conditions, and professional development as the main enabling factors.

Regarding the fifth research question (How do teachers perceive the professional development initiative as a tool to improve the quality of their interactions with the children in their classes?), they gave positive feedback, showed changes in their perspectives on teacher-child interaction quality and their role as teachers, and wanted similar professional development in the future.

This study appeared to present a broader image than in other teacher-child interaction quality studies, illuminating everyday practices within the sociocultural context explored. The qualitative findings suggested that job-embedded professional development could help develop teacher-child interaction quality, especially when focusing on interaction strategies. Therefore, the findings draw attention to the need for early childhood teachers to receive professional development in teacher-child interaction quality. The data indicated that the professional development model offered to teachers, at the outset and

throughout the study, attended to their needs and capacities in their sociocultural setting. In the final chapter, I reflect on these conclusions with recommendations for policy, practice, and research.

<h1 style="text-align:center">Chapter 5: Conclusion and Recommendations</h1>

Introduction

In this study, I have critically examined Saudi teachers' perspectives and practices regarding teacher-child interaction quality before and after a professional development initiative. The qualitative data were collected and analyzed through a sociocultural framework. The findings suggested that systematic professional development could develop teacher-child interaction quality. Job-embedded professional development appeared to meet a variety of teachers' needs and enabled the development of their perspectives and practices.

In this chapter, I set the context for the study and discuss the findings in relation to the literature to answer the research questions. This is followed by an account of the limitations of the study and a discussion of the main findings. Based on those findings, I present the study's contribution to knowledge in this field locally and internationally. I conclude with recommendations for policymakers, practitioners, and researchers. These recommendations offer alternative avenues for thinking and seek to develop teacher child interaction quality and thereby the outcomes for children.

Setting the Context for the Study

As explored in Chapters 1 and 2, ECEC lays the foundation for later learning and development (Melhuish et al., 2015), making this a critical stage of education for countries around the world (Early et al., 2017; National Child Care Information and Technical Assistance Center, 2010; OECD, 2021), including Saudi Arabia (Saudi Ministry of Education, 2022). However, ECEC will only maximize the potential for children's learning and development if it is of high quality (Melhuish et al., 2015; Sylva et al., 2007; Vandenbroeck et al., 2018; Yoshikawa et al., 2013). In light of this, teacher-child interactions have emerged as a key feature of ECEC quality (Burchinal et al., 2010; Downer et al., 2010b; Pianta et al., 2009). Al Shanawani (2023) found that Saudi ECEC

program quality varied widely due to factors such as a lack of qualified teachers. A strategy to address these challenges is improving teacher training programs.

The literature reveals several ways in which teacher-child interaction quality may be developed in ECEC settings, especially through teacher professional development. There is abundant international literature on teacher-child interaction quality and professional development (e.g., Early et al., 2017; Hamre et al., 2012). However, limited research has been carried out in Saudi Arabia regarding ECEC quality in general and teacher-child interaction quality in particular, and no previous studies have examined the role of such programs in developing teacher-child interaction quality in a Saudi context.

With this gap in mind, my aim was to explore teachers' perspectives regarding teacher-child interaction quality and to employ professional development as a tool to develop teacher-child interaction quality in Saudi Arabia. To achieve this, I examined the literature to find the best professional development model. However, a single perfect model does not exist (Smith, 2012). Therefore, rather than being limited to an existing model, I selected professional development characteristics, deemed effective in the literature, to design a unique model that would fit the teachers' needs and the sociocultural context (Guskey, 2003; Kennedy, 2014; Smith, 2012) while developing their perspectives and practices. The initiative was designed with a sociocultural lens, mainly based on the ZPD and scaffolding, which have been expanded by various researchers to include teacher professional development. According to Shabani et al. (2010) and Eun (2008), Vygotsky's claims about students' learning in a school setting (i.e., the ZPD) are applicable to teachers, and the developmental theories of Vygotsky, resting on the notions of the social origin of mental functions, are relevant to teachers' professional development.

Aligning with sociocultural theory, I created a new job-embedded, research-informed model of professional development focusing on teachers' perspectives about teacher-child interaction quality. Job-embedded programs guided by an academic

researcher acting as a mentor/trainer have been shown to be effective in prior studies (e.g., Cummins, 2004; Onchwari & Keengwe, 2008; Rogers et al., 2020a, 2020b). Guided by the literature, I documented the primary objectives of the initiative. This ensured the establishment of a model that would meet the individual needs of the participating teachers. Subsequently, I established a scaffolded model that incorporated commonly cited factors of professional development, mentioned above, along with the Vygotskian concepts of the ZPD and scaffolding. The professional development model focused on five interaction strategies related to sociocultural theory.

Limitations of the Study

Many of this study's limitations were noted by the researcher prior to devising the methodology and were reported continuously throughout the study to ensure methodological rigor and valid findings. First, the sample involved only nine teachers in six classrooms at one kindergarten; as a result, the results could not be generalized to other Saudi kindergartens. However, the sample size was similar to or larger than some studies that have examined that impact of professional development on teacher-child interaction quality internationally in the ECEC field, and unique to Saudi Arabia. Furthermore, the goal of this sample was particularization, not generalization.

The study was conducted by a single researcher, which limited the amount of data that could be processed. However, it still represents the first attempt to gather data on a professional development initiative in a Saudi kindergarten.

The purposive sample from a single kindergarten in Riyadh was another limitation. Furthermore, the researcher's presence during observations, interviews, and focus groups may have influenced the behavior and responses of the teachers.

Each classroom has its own climate, students, and teacher characteristics, making it difficult to control for variables in naturalistic settings. In addition, the study could not

control for factors such as teacher-child ratio or kindergarten administration requirements, which could have influenced the findings.

I did not statistically measure the initiative's impact on teacher-child interaction quality or on children's outcomes. Future research with more resources and quantitative measures adapted to the Saudi context could provide more refined findings.

Teachers could have altered their behavior during observations, interviews, and focus groups due to social desirability bias. They may have consciously or unconsciously presented themselves in a more positive light, leading to a potential discrepancy between their actual behavior and the reported behavior. This bias could have affected the trustworthiness of the data collected.

Another potential limitation are reactive effects and the Hawthorne effect. The teachers' awareness of being observed may have influenced the interactions of both teachers and children. I attempted to limit reactivity by gathering data from multiple sources and participating as an assistant teacher.

The findings might not be easily transferable to different kindergartens. The study's focus on a specific group of teachers and their interactions with children may limit the applicability of the findings to other settings with different demographics, curricula, and teaching approaches.

Conducting participant observations, interviews, and focus groups requires a significant investment of time. It could be argued that given the limited timeframe, I might not have been able to capture a comprehensive understanding of the teacher-child interactions. This could have resulted in an incomplete portrayal of interaction quality, affecting the interpretation of the findings. On the other hand, this initiative was longer than typical professional development programs in Saudi Arabia and uniquely included job-embedded mentoring.

Translating the data from Arabic into English might have affected the meanings of the data, although I tried to make the translation as faithful as possible.

It is important to note that the children and teachers during this initiative had just started in-person schooling again after the COVID-19 pandemic. This might have negatively affected teachers' interactions at the beginning of the initiative.

Finally, reflexivity was another limitation. As a researcher with prior teaching experience in kindergartens as a lecturer and practicum student supervisor in Saudi Arabia, as well as experience in U.S. ECEC centers, I may have had preconceived notions and biases that influenced data collection and analysis. To address this concern, I engaged in reflexivity by actively reflecting on my biases and assumptions throughout the research process. The act of engaging in reflexivity required me to critically reflect on my assumptions and biases, which was a challenging and time-consuming process. Additionally, I struggled to accurately identify my own biases, as they are often deeply ingrained and unconscious. However, it is important to acknowledge that my perspectives may have shaped the interpretation of the findings.

Summary of Research Findings

In this section, I review the main findings of the study that answer the research questions. The primary question asked, "How do Saudi early childhood education teachers perceive teacher-child interaction quality?" This question was divided into five sub-questions:

1. How do teachers perceive their practices related to teacher-child interaction quality before the professional development initiative?

2. How do teachers perceive their practices related to teacher-child interaction quality after the professional development initiative?

3. Have any changes emerged in teachers' pedagogical strategies as a result of the professional development initiative?

4. What factors enable or constrain quality interactions according to teachers?

5. How do teachers perceive the professional development initiative as a tool to improve the quality of their interactions with the children in their classes?

The main findings are discussed in the following sections: the self-learning curriculum and teacher-child interaction quality, teachers' role in supporting children's learning and development, interaction strategies, learning environment, factors affecting teacher-child interaction quality, and teacher professional development. It is important to note that the findings were based on two key periods of the daily schedule: learning corner time and outdoor time.

Self-Learning Curriculum and Teacher-Child Interaction Quality

At first, teachers appeared unfamiliar with the concept of teacher-child interaction quality but had clear perspectives about their role in children's learning and development. These perspectives were based mainly on the self-learning curriculum (Ministry of Education, 2005), which is underpinned by play-based learning. They expressed this sentiment verbally and through their practices. They placed a heavy emphasis on preparing the learning environment with activities that children could do mostly on their own with minimum interference from the teacher (cf. Ministry of Education, 2005), where children could freely choose play activities (cf. Pyle & Danniels, 2017). This showed that teachers were largely passive in their role with children. However, they viewed this method of teaching as an implementation of the self-learning curriculum, saying that corner time was self-learning time, similar to "child-directed play" (see Pyle & Danniels, 2017).

In general, teachers' perspectives before the initiative reflected a conceptualization of play as an activity that teachers should not interfere with, in which the teacher's responsibility is "to support, not to disturb" (Pramling Samuelsson & Johansson, 2006, p. 48) and to avoid contriving or "hijacking" the play (Goouch, 2008, p. 95). Therefore, teachers' perspectives and practices opposed the idea of guided play (see Pyle & Bigelow, 2014). After the initiative, this perspective shifted, with teachers describing play as an

opportunity for children to explore and understand academic concepts and teacher involvement as a chance to expand and encourage learning (cf. Pyle & Bigelow, 2014; Weisberg et al., 2013).

The teachers reported improving their understanding of play-based learning and the self-learning curriculum after the initiative. Before the initiative, they were mainly focused on free-play/child-directed play, but afterward, they included teacher-guided and self-learning as worthy goals. They expressed more clearly the importance of their interaction and participation in children's play and how this interaction could benefit children, agreeing with Vygotsky's (1979) perspective on the role of adult interactions in children's learning and development.

Most teachers' responses showed a shift in their understanding about play-based learning. This shift was either in seeing the value of interaction to guide children's play or in how they saw their role in children's play and learning. In this way, their perspectives became more in line with Weisberg et al.'s (2013) description of guided play, which preserves unstructured play while allowing children to relate to material in a real way. Children co-construct learning with teachers and peers, making meaningful discoveries and working towards learning goals. Guided play is pleasurable, self-selected, process-focused, child-directed, and teacher-facilitated, with teachers actively participating as planners, observers, and guides (Weisberg et al., 2013). By the end of the initiative, teachers said they tried to have more teacher-guided activities with children in the learning corners using the interaction strategies that the initiative focused on (see the interaction strategies section for further details).

By the end of the initiative, teachers showed a deeper understanding of teacher-child interaction quality that aligned with the literature. For example, they stated that high-quality interaction is a daily exchange between teachers and children (cf. Hamre et al., 2014), is always purposeful, and involves teachers interacting with children with a goal in

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mind, such as teaching them a concept through a scientific experiment or teaching about something they need (DEEWR, 2009; Epstein, 2007). The teachers said they had become more intentional in interacting and initiating interactions with children, in contrast to their previous attempts not to interrupt children's play unless the children asked and in other specific cases. This followed sociocultural theory's assertion about the important role of adult interactions in children's learning and development (Topçiu & Myftiu, 2015).

By the end, teachers showed changes in their practices related to a play-based learning approach. More specifically, they were interacting with children more in guided play, using more interaction strategies with children, and initiating more interactions. In other words, they sought to participate actively to promote children's learning and development through interaction strategies. Teachers appeared to intentionally reconsider their role in engaging in children's play (cf. Epstein, 2007).

Overall, teachers' perspectives and practices related to the self-learning curriculum (Ministry of Education, 2005) appeared to shift after the initiative from focusing on free or child-directed play to including guided play. While teachers were acting with intentionality in play-based learning, they acknowledged children's freedom in play and their agency for creative expression (cf. Leggett, 2023). In this way, they showed a merging of learning through play and intentional teaching into a new practice, play-based learning and intentionality, aligning with recent literature, such as Leggett (2023) and AGDE (2022).

Teachers' Roles in Supporting Children's Learning and Development

Before the initiative, teachers viewed their role as encompassing supervising and monitoring, facilitating friendship, solving behavioral problems, and supporting language development. Teachers stated these roles verbally and were observed practicing them as well.

The teachers emphasized that their main role was supervising children and monitoring their safety. This included making sure children followed classroom rules,

which in the teachers' opinion was essential to have a positive learning environment and to help children understand what they could expect from themselves and other children in the class (cf. Beazidou et al., 2013; NAEYC, 2022). This role included making sure children were engaged in learning activities, as opposed to focusing on interacting with children through the activities, in order to give the children the freedom to learn on their own, which is the core of the Saudi self-learning curriculum (Ministry of Education, 2005). However, they also said they were responsive when children initiated an interaction, such as asking the teacher to play with them, asking the teacher a question, or asking for help in doing an activity. The teachers said they could initiate the interaction or interfere when necessary if they noticed a behavioral problem or that a child was not engaging in any learning activity during corner time.

Teachers stated that their role extended to facilitating children's friendships and social interaction among children. In their opinion, this included "design opportunities that promote peer engagement, help children sustain and enhance play, and help children resolve conflict" (NAEYC, 2022, p. 11). They emphasized the importance of providing activities that would promote positive social interactions among young children as well as the impact of supportive adults in facilitating social skill development and creating a welcoming and inclusive environment for all children. This finding was similar to Kemple (2004) and Tan and Perren (2021).

Teachers likewise described managing children's behavior as one of their roles before the initiative. They stated that one of the ways a teacher could help a child solve behavioral problems was by developing alternative behavior, such as through sharing and discussion. They added the importance of spotting and talking about feelings and cooperating with families to solve problems. These responses were similar to NAEYC (2022) standards. One factor they reported that could help avoid behavioral problems and

manage the class was a high-quality learning environment (Touhill, 2017) and letting children implement classroom rules (cf. Beazidou et al., 2013).

The teachers stated that another role they had was supporting children's language development in different ways, such as encouraging them to engage in roleplay with their friends in the learning corners or doing some activities such as show and tell (see Mortlock, 2014). All the roles noted by the teachers agreed with sociocultural theory's main principle that children's learning and development occur in the context of their communities (Nolan & Raban, 2015; Vygotsky, 1979).

In general, the teachers listed several roles they had as ECEC teachers before the initiative, especially supervision, but placed more emphasis on interaction after the initiative, viewing their interactions as a key factor in children's learning and development (cf. Rogoff, 2003; Vygotsky, 1979). At the same time, the observations showed that teachers continued focusing on the roles they emphasized above in addition to using the initiative's interaction strategies.

Interaction Strategies

Informed by sociocultural theory, I selected five teaching strategies for the initiative: questioning, feedback, discussion, problem-solving, and sustained shared thinking (Siraj-Blatchford et al., 2002). These strategies were largely based on the ZPD (Topçiu & Myftiu, 2015) and scaffolding (Siraj-Blatchford et al., 2002). Before the initiative, teachers mentioned some of these as strategies they used with children. The findings showed general development in their perspectives on four of the target strategies: questioning, feedback, discussion, and problem-solving. Teachers also said they had started considering three new strategies in their interaction with children: sustained shared thinking, planning activities based on children's interests, and encouraging children to complete their work.

Before the initiative, questioning was mentioned by only a few teachers as an interaction strategy. However, all teachers after the initiative mentioned using it to interact

with children and emphasized open-ended questions as a way to promote learning and development, in keeping with the literature (e.g., Gourlay et al., 2020; MacNaughton & Williams, 2008; Parker & Hurry, 2007). Even teachers who had not mentioned questioning before the initiative described it as a strategy afterward. The teachers showed they had become more aware of the importance of this strategy by saying they wanted to change the daily question to an open-ended question. Some of the teachers mentioned extending this strategy to include encouraging children to ask questions to improve learning. Some stated that children's questions were important and that teachers needed to know how to answer them and benefit from them in extending children's learning, similar to such studies as Baram-Tsabari (2006), Olsson (2013), and Murray (2022). All teachers used questioning as an interaction strategy before the initiative but relied more on closed-ended questions, similar to Siraj-Blatchford and Manni (2008). However, during the last weeks, some teachers asked more open-ended questions and used other techniques, such as asking one short question at a time and giving children time to think and respond, in agreement with Dengler (2009) and MacNaughton and Williams (2008). On the other hand, they still used closed-ended questions when there was a chance to use open-ended questions. As noted by some teachers they needed more practice and training with asking open-ended questions.

Feedback was mentioned indirectly only by one teacher before the initiative as an interaction strategy, but most considered it an important strategy that supported children's learning by the end of the initiative (cf. Pushparatnam et al., 2021). Their perspectives after the initiative aligned with Shin et al.'s (2007) assertion that feedback could be seen as a simple strategy, but it is important for teachers to pay attention to their feedback style and their strengths and weaknesses in applying it intentionally. Teachers pointed out some characteristics about effective feedback, such as giving it as soon as possible and describing a child's work rather than judging it, agreeing with Dunlap et al. (2007) and Pushparatnam et al. (2021), and giving children the sense that the teacher is interested in

their accomplishments and responsive to their attempts to learn, agreeing with Shin et al. (2007).

In the beginning of the initiative, teachers implemented feedback to interact with children even before being introduced to it in the workshops. However, they used verbal feedback mainly to express appreciation of effort (e.g., "good job") or to promote positive behavior (e.g., "I like your attitude when you apologized"). Nevertheless, the observations did show effective feedback that promoted learning by giving children clear, specific information about their work that helped them to deepen learning (cf. Dunlap et al., 2007; MacNaughton & Williams, 2008). Furthermore, teachers did not use nonverbal feedback at the beginning of the initiative, in keeping with studies claiming that verbal feedback can be more appropriate in early education (e.g., Dunlap et al., 2007; Pushparatnam et al., 2021).

By the end of the initiative, teachers were observed implementing effective feedback more often, showing interest in children's accomplishments and being responsive to their attempts to learn, in agreement with Shin et al. (2007). Feedback was mainly used in learning corners to support science, mathematics, and literacy (cf. Pushparatnam et al., 2021; Shin et al., 2007). This approach may be related to teachers coming to view intentional teaching strategies (such as feedback) as part of play-based learning (see AGED, 2022).

All teachers explained discussion more thoroughly after the initiative, while only four even mentioned it as a strategy before. They stated that through class discussions, they could teach children respect for others, improve communication skills, and show how to interact with peers and adults, aligning with the literature (e.g., Illinois Early Learning Project, n.d.; Sylvia, 2009). Moreover, one teacher claimed that children come up with creative ideas when they discuss a problem, which aligned with Sylvia (2009).

In the beginning, teachers used discussion during corner time and on the playground to solve behavioral problems. Only a few conversations were observed during

corner time that could support children's learning, and these could have been extended (see Siraj-Blatchford & Sylva, 2004). A potential reason for the brevity of these conversations was that teachers saw play-based learning as child-directed play that should have minimum interference from the teacher and they were focusing more on monitoring children.

On the other hand, in the last few weeks, teachers were having longer conversations and appeared to benefit from ideas presented in the workshops, such as having discussions after a story that a teacher would lead. Such activities provided opportunities to develop children's thinking capacity (cf. Kook, 2023). In addition, teachers tried to engage in discussions that involved positive, targeted verbal feedback (cf. Kook, 2023) and clarify misunderstandings, which aligned with Howard et al. (2018). Some tried to engage children in longer discussions more often to help them plan, evaluate, or reflect on their activities, in accordance with the OECD (2012, 2014).

Problem-solving is one of the main interaction strategies in ECEC (NAEYC, 2022; OECD, 2012), but only two teachers mentioned it before the initiative and only four mentioned it as important afterward. In the first few weeks, teachers used problem-solving mainly to resolve conflicts between children, similar to MacNaughton and Williams (2008), rather than to support learning. During the last few weeks, some were using it as an interaction strategy in certain situations. They facilitated problem-solving by valuing children's problems and solutions, focusing on children's answers, and encouraging them by creating a positive climate in which children felt free to try their own solutions or share their solutions with the group, in alignment with Recep (2018). Also, teachers encouraged children to listen to and understand other perspectives, identify problems, and find different solutions, as recommended by the NAEYC (2022).

Teachers were observed implementing problem-solving with materials and giving children the chance to test their solutions individually and in a group, in keeping with MacNaughton and Williams (2008) and Recep (2018). The materials used to encourage

problem-solving were appropriately flexible and open-ended, such as water, sand, blocks, and art materials.

Teachers reported that the workshops were the first time they had been exposed to the concept of sustained shared thinking; even so, eight mentioned it after the initiative as a high-quality interaction strategy, aligning with Siraj-Blatchford et al. (2002) and Touhill (2012a), and said they were trying to use it in their classes. They expressed an understanding of how this strategy depends on the other strategies that this initiative focused on: questioning, feedback, discussion, and problem-solving (cf. Fisher, 2006; Siraj-Blatchford et al., 2002; Touhill, 2012a). Teachers after the initiative stated that they were not involved in sufficiently deep interactions with children and that sustained shared thinking could let them interact in more meaningful discussions and ask open-ended questions that would create opportunities for learning together. Teachers also expressed their interest in implementing activities that involved sustained shared thinking. This strategy required more practice and preparation for open-ended questions and further professional development. However, some teachers were observed using this strategy, which they referred to as "interaction," and in some cases, teachers planned activities to implement it.

Another interesting post-initiative finding was that teachers showed an interest in planning activities based on children's interests to extend their learning. According to the teachers, this strategy promotes engagement, motivation, and positive attitudes toward learning. They emphasized the importance of giving children the chance to choose topics and plan activities based on their interests and questions, which can promote a sense of belonging and engagement, essential for children's overall development and well-being. Similar claims have been made in Baram-Tsabari (2006), Olsson (2013), and Murray (2022). Teachers said this strategy aligned with play-based learning, although challenges such as time constraints, curriculum requirements, differing interests among children, and a

large class size hindered its implementation. Despite these challenges, teachers were observed implementing simple activities based on children's interests when possible.

Although only discussed as a side point in the workshops, encouraging children to have perseverance and persistence emerged as a key takeaway, as reported by the teachers, in line with the literature (e.g., Leonard & Garcia, 2020; McClelland et al., 2011). Observations did not show many examples of this strategy being implemented, perhaps due to the hindering factors teachers mentioned or their focus on implementing the main interaction strategies.

Teachers generally showed more development in their perspectives and implementation of four strategies that they had been using before the initiative: questioning, feedback, discussion, and problem-solving. Sustained shared thinking was a new strategy introduced to them in this initiative, and they showed an interest in implementing it.

First, some teachers planned activities to extend children's learning and planned activities based on children's interests. This stemmed from some examples given in the initiative, after which teachers identified children's interests by observing children play, in agreement with Seitz (2006). However, this strategy was only observed a few times, even though they emphasized the importance of this strategy after the initiative, as mentioned above. This paucity of examples was likely due to the activities in the kindergarten being generally planned by the administration, limiting the chances for teachers to plan this kind of activity. Second, although encouraging children to have perseverance and persistence emerged as an important theme, there were few observed instances of teachers encouraging children to complete their work.

The observations also showed how teachers interacted during one of the most important periods in the kindergarten's daily program: outdoor playtime. The teachers' role during this period tended to be passive and focus mainly on monitoring children's safety.

In addition, there was always a large number of children (typically 28–30) for one teacher. A teacher would generally remind the children about outdoor rules in the beginning of the period and then sit on a chair and watch the children play. Teachers also focused on dealing with behavioral problems (resolving conflicts) and answering questions. This conflicted with studies that view teacher-child interaction quality as daily social and instructional exchanges within a positive environment (e.g., Hamre et al., 2014; Howes et al., 2008; Manning et al., 2019), suggesting the teachers could have taken advantage of more learning opportunities outdoors.

In summary, the main goal of this initiative was to develop teacher-child interaction quality by focusing on five interaction strategies. Observations revealed teachers adopting these strategies and focusing more on teacher-guided play, following the international call for better play-based learning with intentionality (e.g., AGDE, 2022; Leggett, 2023).

The Learning Environment

The learning environment was emphasized by teachers as an important factor in teacher-child interaction quality before the initiative, and they continued emphasizing its connection with almost every aspect of ECEC, including teacher-child interaction. This led to overlap between the findings, as mentioned in Chapter 4, and made separating the themes difficult. One possible reason for this was the self-learning curriculum, which views the establishment of an enriching play-based environment as the main factor in children's learning (Ministry of Education, 2005). Although teachers still emphasized the learning environment after the initiative, they showed more understanding of teacher-child interaction as a key factor in learning and development. Below is a summary of the main findings on teachers' perspectives about the learning environment.

Even before the initiative, all teachers could list key characteristics of a high-quality learning environment that aligned with the Ministry of Education (n.d.), international standards such as the NAEYC (2018, 2022), and literature such as Touhill

(2017). They noted that the physical environment affected the quality of ECEC interactions (cf. OECD, 2021) and shaped their behavior as educators and children's behavior as learners. They agreed with Touhill's (2017) claim that a well-resourced environment could keep children more engaged in meaningful and extended learning, giving educators more time for supportive interactions.

Most teachers cited safety as the most important characteristic, which reflected their broader emphasis on their supervisory role. Although children's safety is essential, teacher-child interaction is also vital for "their development, learning and well-being" (OECD, 2021, p. 3). While teachers emphasized the risks of outdoor learning (cf. Coleman & Dyment, 2013; Erdem 2018), they also showed interest in risky play outdoors in the form of AnjiPlay, saying this was a key takeaway from the initiative.

Teachers likewise noted that a socially, emotionally, and cognitively supportive learning environment was important to teacher-child interaction quality before and after the initiative. They emphasized closeness, unconditional acceptance, love and tenderness, getting down to a child's level, and communicating with children (cf. Hamre & Pianta, 2007; Mashburn et al., 2008; NAEYC, 2018, 2022). They also emphasized making sure all children interact and enjoy the activities and providing an environment with developmentally appropriate learning opportunities (cf. AGDE, 2022; Hamre, 2014).

The teachers' perspectives on the importance and characteristics of a good learning environment were nearly the same before and after initiative, with general agreement about the essential role it played in teacher-child interaction quality. After the initiative, teachers emphasized the importance of asking children about their opinions and suggestions regarding the learning environment and activities, considering children's opinions when planning activities or changing the classroom (which they noted as a new strategy for them), and using open-ended materials (cf. AGDE, 2022; NAEYC, 2022; OCED, 2021).

Factors Affecting Teacher-Child Interaction Quality

The teachers' considered teacher-child interaction quality to be influenced by various factors, including teachers' professional development opportunities (Early et al., 2017; Pianta, et al., 2008), working conditions (Markowitz & Seyarto, 2023; OECD, 2011), communication and cooperation with parents (AGDE, 2022; Halgunseth, 2009; NAEYC, 2022), the teacher-child ratio (NAEYC, 2021), and the kindergarten administration (Gadikowski, 2013).

Teachers noted how professional development could enhance the quality of teacher-child interaction and asked for more training to develop their interaction strategies, especially questioning and sustained shared thinking. Working conditions, such as a positive and stimulating work environment, adequate learning resources, and supportive kindergarten administration, were other important factors in interaction quality. In addition, they mentioned effective communication and cooperation with parents as crucial for improving interaction quality, as this involves parents in their children's learning and reveals insights into the children's background and experiences.

Teachers noted that a high teacher-child ratio hindered teacher-child interaction quality. The appropriate ratio in their opinion was 12 children for each teacher, with 24 children and two teachers in the class being ideal (cf. NAEYC, 2021). They also stated that the kindergarten administration's policies played a crucial role in determining teacher-child interaction quality, as a supportive administration would offer opportunities for professional development, establish good working conditions, and empower teachers to plan activities and make decisions for their classes.

Teacher Professional Development

The teachers gave largely positive feedback about the initiative. Some recommended repeating it for teachers who had not participated and in other kindergartens. Teachers agreed that this was their first time receiving professional development on teacher-child

interaction quality, a concept they were not familiar with. However, they became more fluent and specific in their answers about this topic after the initiative. Teachers highlighted a shift in their thinking about teacher-child interaction and ECEC quality in general. For example, some said they had started viewing their interactions as a key factor in early education quality, which has been widely acknowledged in studies such as McNally and Slutsky (2018) and Melhuish et al. (2015). They said the initiative had changed their perspective about ECEC quality, seeing the interaction between teacher and child as bidirectional, with positive, purposeful interaction throughout the day supporting learning and development, similar to Hamre et al. (2012) and Hoang et al. (2018). Moreover, teachers said they misunderstood the self-learning curriculum as depending entirely on learning through free play with minimum interference. These perspectives aligned with the growing push for teachers to integrate traditional beliefs about play with new insights into the role of social interactions, modeling, and relationships in children's learning (Edwards, 2017).

Teachers claimed the initiative gave them ideas for addressing the high teacher-child ratio. This included implementing the strategies they learned in the initiative, especially discussion and sustained shared thinking, in addition to their interest in implementing some risky outdoor play (i.e., AnjiPlay).

Overall, the key takeaways teachers reported were related to the interaction strategies presented in the workshops, in addition to the development in their understanding of the self-learning curriculum. However, two of the main points they agreed on were not main components of the workshops: encouraging children to complete their work and risky play (AnjiPlay).

The teachers mentioned several components they felt made the professional development a useful tool that improved their understanding and practices regarding teacher-child interaction quality. In their Vevox feedback, they emphasized discussion,

practical examples of implementing strategies, and videos from high-quality ECEC around the world. Those points are discussed in the next section.

Teachers said they needed more such programs to develop their interaction strategies, especially questioning, feedback, and sustained shared thinking. Overall, the professional development in this small-scale investigation showed promise in changing practices in relation to teacher-child interaction quality, with all teachers reporting it to be effective. Teachers maintained that the initiative differed from the traditional model they had seen before, i.e., consisting of one or two workshops (cf. Jerald, 2012). The findings suggested that teachers required guided and sustained assistance after the workshop to help implement strategies, reflect on their practices, and get feedback.

Contribution to Knowledge

Despite the growing demands for professional development to help teachers support children's development and learning, this area remains understudied, with little determined about what would constitute the most effective models to follow (Han, 2012). As shown by Zaslow et al. (2010a, 2010b), most ECEC professional development has focused on children's academic skills, mainly literacy, even though many studies have demonstrated the importance of teacher-child interaction (e.g., Downer et al., 2010a; Early et al., 2017; Hamre, 2014; Hamre & Pianta, 2007; McNally & Slutsky, 2018; Melhuish et al., 2015; Siraj-Blatchford & Sylva, 2004; Wylie et al., 2006). In addition, no Saudi studies have focused on improving teacher-child interaction quality through professional development. In fact, professional development for Saudi teachers in general, and ECEC teachers in particular, is very limited and relies heavily on workshops that last for only one or two days. To address this gap, I designed an initiative to improve teacher-child interaction quality in a public Saudi kindergarten.

Despite its potential benefits, improving teacher-child interaction quality through a job-embedded professional development model is a new concept in Saudi research and

practice. Thus, I have sought to provide evidence on the duration, frequency, and intensity of professional development in this context. As such, this is the first study to examine the effect of professional development on Saudi ECEC teachers' perceptions and practices regarding teacher-child interaction quality, adding to the growing ECEC research in Saudi Arabia (e.g., Al-Ahmadi, 2009; Al-Othman, 2015). Based on its reported and observed effects, the proposed model could act as a foundation for future work designing professional development for this context.

By eliciting teachers' opinions and directly observing their practices, this study contributes to existing knowledge on professional development strategies for enhancing teacher-child interaction quality. As such, the findings add to the limited Saudi and international research on this topic. Furthermore, the study serves as a foundation for future research on the factors that influence teacher-child interaction quality and the effectiveness of different professional development approaches in different cultural and educational contexts. It is hoped that the findings will foster ongoing discussions, collaborations, and advancements in the ECEC field, ultimately benefiting children's learning and development.

The most effective parts of the initiative appeared to be collaborative learning and discussion, in-class implementation of interaction strategies, teacher reflection, feedback, and learning resources.

Based on the literature, study findings, and sociocultural theory—i.e., the ZPD and scaffolding (Eun, 2008; Shabani et al., 2010)—I have produced a model for professional development that targets Saudi teachers' perspectives and practices, is job-embedded (Darling-Hammond et al., 2017; Pacchiano et al., 2016), includes multiple workshops (Brunsek et al., 2020), focuses on interaction strategies (Egert et al., 2020; Siraj et al., 2023), is based on discussion and collaborative learning with video examples (Arya et al.,

2015; Christ et al., 2014) of high-quality ECEC settings, and features an exchange of experiences between participants and a mentor. This model is illustrated in Figure 5.1.

Following the workshops, teachers asked to implement the interaction strategies with mentor support, i.e., helping them reflect on their practices and giving feedback (Darling-Hammond et al., 2017). This model fosters a learning community that offers collaborative learning through discussion via social media (Cansoy, 2017) and sharing resources such as handouts, articles (Sakraida et al., 2005), and videos (Rubio-Alcalá et al., 2020).

This model was designed to align with any evidence-based curriculum informed by the international literature. Due to the model's inherent flexibility, it can be adapted to other contexts by researchers or trainers as long as they understand the framework underpinning the model, the local teachers' needs and knowledge, and the social context.

Figure 5.1: Proposed Professional Development Model

At a national level, this research sheds light on the potential of job-embedded professional development to develop teachers' perspectives and practices regarding teacher-child interaction. By incorporating professional development within the teacher's

daily work, I challenge the traditional approach of detached, one-size-fits-all workshops. The findings highlight the potential of job-embedded models to foster sustainable and contextually relevant learning experiences for educators in Saudi Arabia. Furthermore, this study contributes to the ongoing international discourse on teacher development, emphasizing context-specific approaches.

Recommendations for Policy and Practice

Based on the findings, I offer the following recommendations for policymakers and practitioners. The first is to align the Saudi self-learning curriculum with the literature by finding a balance between child-guided and teacher-guided learning (AGDE, 2022; Epstein, 2007; Leggett & Ford, 2013; Pyle & Danniels, 2017). To this end, the curriculum should place greater emphasis on teacher-child interaction in learning corners and outdoor learning (Maier et al., 2020; OECD, 2021; Tonge et al., 2018) rather than only preparing the learning environment (cf. Bukhalenkova et al., 2022; Melhuish et al., 2015; Yang et al., 2021). The curriculum should be reviewed in light of recent literature highlighting teachers' intentional interactions in play-based learning (e.g., AGDE, 2022; Leggett, 2023).

The curriculum should likewise emphasize teacher-child interaction outdoors (Howe et al., 2021), and policy should require appropriate teacher-child ratios in that context (Coleman & Dyment, 2013; Maynard & Waters, 2007). Also, the Ministry of Education should examine how children might benefit from the risky outdoor play, for example AnjiPlay approach, and adapt it to the Saudi context, as it could benefit children's development (Liu & Birkeland, 2022) through rich opportunities for problem-solving, learning, and social skills development (Greenfield, 2004). Brussoni et al. (2015) found that the overall positive health effects of increased risky outdoor play provided a greater benefit than the associated risks.

More funding is needed for research documenting high-quality evidence-based professional development programs for teachers in ECEC. The findings could shape ECEC educational policies, develop teacher-child interaction quality, improve professional development, and guide future research in the field. More professional development should be given on interaction strategies, such as sustained shared thinking, feedback, and questioning (Hamre & Pianta, 2007; McNally & Slutsky, 2018). The model proposed in this study could be implemented in any Saudi kindergarten by a researcher or trainer with experience in ECEC professional development and could be adjusted to the given context. Teachers should have mentoring sessions associated with this professional development to get feedback from an expert in the field while training them to be more reflective on their practices (Early, 2017; Egert, 2020; OECD, 2018; Onchwari & Keengwe, 2008).

According to international standards, the teacher-child ratio should not exceed 1:12 (NAEYC, 2021; Rogers et al., 2020b). Higher child-teacher ratios are negatively related to children's learning and development (e.g., Hong et al., 2019), while lower ratios enable teachers to focus on the individual needs of children, engage them in meaningful interactions (OECD, 2011), improve child outcomes, reduce behavioral problems, lower teacher stress, improve the teacher's experience, and lower rates of special education (e.g., Ackerman & Barnett, 2006; Pianta et al., 2005; Schachner et al., 2016). A lower ratio does not automatically translate into higher-quality learning, however, as teachers need to adapt their pedagogy to take advantage of the lower ratio. If lowering the ratio to international standards is not possible in some cases, teachers should receive special training to manage larger group sizes (Hong et al., 2019).

Kindergartens should give teachers more flexibility to plan activities themselves (Epstein, 2007; OECD, 2021) based on children's interests (Biermeier, 2015). Children learn best when they are interested and engaged (Touhill, 2012b). Planning activities based on children's interests to extend their learning and development is thus an important aspect

of high-quality ECEC (AGDE, 2022; Copple & Bredekamp, 2009; Hedges et al., 2011; NAEYC, 2020).

Policymakers and administrators should provide non-financial support and incentives for teachers to improve their well-being and encourage ongoing professional development (OECD, 2011). For instance, administrators could employ more flexible requirements to promote teacher-child interaction quality, especially in terms of the daily schedule (Gadikowski, 2013), which should be predictable yet responsive to individual needs (NAEYC, 2022).

Regarding practitioners, I would encourage teachers to build positive and supportive relationships with children (NAEYC, 2009; Yoshikawa et al., 2013) through warm, responsive interactions and acknowledging children's interests. When children feel valued and supported, they are more likely to engage in learning (Touhill, 2012b). I also emphasize the role of effective interaction between teachers and children through questioning, feedback, discussion, problem-solving, and sustained shared thinking.

Teachers should pay attention to the type of questions they ask children, try to ask more open-ended questions that promote thinking and learning, and leverage children's questions and interests to extend their learning (Murray, 2022; Olsson, 2013).

Feedback is especially effective when teachers give children clear, specific information about their work, as this helps them think for further learning (Dunlap et al., 2007; MacNaughton & Williams, 2008); describe children's work rather than judge it; and deliver feedback as soon as possible after the action being commented on (Pushparatnam et al., 2021).

Teachers should involve children in good discussion based on meaningful questions and positive feedback (Kook, 2023). Group discussion can produce a high level of cognitive conflict, thus stimulating children's positive thinking and producing higher-order

thinking (Sylvia, 2009). As an example, a group discussion could follow reading a story (Kook, 2023).

Problem-solving is a foundational skill in all walks of life, and teachers can nurture it in children by creating an environment that encourages such activities, provides guidance, acknowledges emotions, fosters a culture of trial and error, and creates a safe space for learning (Kook, 2023; MacNaughton & Williams, 2008; Touhill, 2012a).

Adapting sustained shared thinking to interactions with children can promote the development of language, social, and critical-thinking skills (Touhill, 2012a) and lead to better developmental progress (Wall et al., 2015).

Finally, I encourage teachers to engage in regular self-reflection (Boud et al., 2013; Daniel et al., 2013) and professional development focusing on teacher-child interaction quality (Siraj et al., 2023). By reflecting on their practices, teachers can identify areas for development and implement new strategies to enhance their interactions. Well-designed and well-delivered professional development has been shown to contribute to teacher-child interaction quality (Hamre et al., 2012; Siraj et al., 2023).

Recommendations for Future Research

Future studies could employ a larger sample to arrive at more robust and generalizable results. Including more participants from different kindergartens across Saudi Arabia would enhance the external validity. Additionally, including participants from different cities or types of kindergartens (public, private, international) could provide valuable insights into the impact of professional development on teacher-child interaction across diverse contexts.

A longitudinal study would allow researchers to examine the long-term effects of this professional development model. By following the same group of teachers over an extended period, it would be possible to track changes and identify sustained development.

Future studies could employ a control group to compare the impact of the professional development with a group that did not participate in it. This would help determine whether any improvement in teacher-child interaction could be attributed to the professional development or if it was due to other factors, such as experience.

Examine the impact of various models of professional development programs on the quality of teacher-child interactions. For example, examining the success of comparing the outcomes of programs that focus on certain interaction strategies with those that take a more holistic approach to professional development.

Including the perspectives of parents and children could offer a more holistic understanding of the impact of professional development. Data could be gathered from parent interviews or surveys to see if they notice changes in teacher-child interaction quality. Similarly, studies could elicit children's perspectives via age-appropriate methods, such as observations or asking them about the activities their teachers implement.

Investigate the effect of contextual factors in shaping the influence of professional development on the quality of teacher-child interactions. Professional development efforts' efficacy may be influenced by factors such as school resources, classroom size, and student demographics. Examine how these elements interact with professional development treatments to see how they affect the quality of teacher-child interactions.

Examine how teacher beliefs and attitudes toward professional development influence outcomes on the quality of teacher-child interactions. Investigate whether teachers who have favorable attitudes and views about professional development are more likely to implement the interaction strategies they learn and have better interactions with children.

Investigate the relationship between the quality of teacher-child interactions as a result of professional development and children's outcomes. Examine if increases in the quality of teacher-child interactions lead to increased children's engagement in activities,

and socio-emotional and language development. This would demonstrate the larger impact of professional development programs on children's learning and development.

By conducting additional research in these areas, we may gain a better knowledge of the impact of professional development on the quality of teacher-child interactions and inform the development of more effective and focused interventions in the future.

Conclusion

Based on the literature showing the importance of teacher-child interaction (e.g., Hamre, 2014; Hamre & Pianta, 2007; Melhuish et al., 2015) and professional development's role in teacher-child interaction quality (e.g., Early et al., 2017; Hamre et al., 2012; Pianta et al., 2008; Siraj, 2023), Saudi Vision 2030 development goals, and the researcher's "felt need" as an educator, this was the first study of its kind to examine Saudi teachers' perspectives and practices regarding teacher-child interaction quality before and after a professional development initiative.

The study was guided by a sociocultural framework that has been extended to include teacher-child interaction (Bodrova & Leong, 2005; Bukhalenkova et al., 2022; Fernyhough, 2008), as well as teachers' professional development (Eun, 2008; Shabani et al., 2010). This framework helped me to understand teacher-child interaction, design a job-embedded professional development model, and collect and analyze data. Based on this literature and framework, I developed a professional development model targeting five interaction strategies that teachers implemented during the initiative. Data were collected before, during, and after the initiative to determine if there were any changes in teachers' perspectives and practices.

Teachers' perspectives on teacher-child interaction relied heavily on the Saudi self-learning curriculum (which is underpinned by play-based learning), emphasizing the importance of preparing the learning environment for children to work on their own with minimal interference from teachers. As such, teachers viewed their role as passive

implementation of that curriculum, focusing on supervision and safety. After the initiative, they reported they could interact with children to promote learning and development using interaction strategies within the self-learning curriculum.

Teachers showed a general development in their perception and use of the interaction strategies, including sustained shared thinking, which they said was entirely new for them. While they showed awareness of several factors affecting teacher-child interaction, they put great emphasis on teacher-child ratio and administrative requirements and noted the importance of professional development in teacher-child interaction quality.

The evidence suggested that professional development, if used systematically, could improve teacher-child interaction. Job-embedded professional development in particular was found to be sufficient to meet a variety of teachers' needs and effective at shifting their perspectives and practices.

<div align="center">**References**</div>

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Appendices

Appendix A: Ministry of Education Approval

الموضوع: تسهيل مهمة بحث

الى: مديرة مكتب التعليم / شمال   حفظها الله

السلام عليكم ورحمة الله وبركاته

إشارة إلى خطاب مدير إدارة التخطيط والتطوير رقم (٤٣٠٠٤١٢٥٤٧) وتاريخ ١٤٤٣/٣/٢٩هـ بشان تسهيل مهمة بحث الباحثة/ نورة حمد عبد الله الشبيلي(مرفق).

عليه نامل منكم تسهيل مهمة الباحثة مع التاكيد على أخذ موافقة ولي الأمر وفق النموذج المرفق مع الخطاب على الأداة المستخدمة في البحث (ملاحظة).

وتقبلوا تحياتي وتقديري

مديرة إدارة رياض الأطفال

مشاعل بنت محمد السليمي

دخل ضراء

الرقم ....
التاريخ: ٢٩/ ٣ /١٤٤٣هـ
المشفوعات : نموذج موافقة ولي الأمر

وزارة التعليم

" تسهيل مهمة بحث "

الاسم	نورة حمد عبدالله الشبيلي		
السجل المدني	100103685٢	العام الدراسي	١٤٤٣هـ
الجامعة	جامعة الأميرة نورة بنت عبدالرحمن	التخصص	الطفولة المبكرة
الدرجة العلمية	دكتوراه	عينة الدراسة	معلمات - أطفال
عنوان الدراسة	تصورات معلمات رياض الأطفال السعوديات حول جودة التفاعل بين المعلمة والطفل قبل وبعد "مبادرة للتطوير المهني المستمر"		
فترة التطبيق	خلال الفصل الدراسي الثاني للعام ١٤٤٣هـ		
نوع التسهيل	بعد الاطلاع على الأدوات البحثية، وبحسب ما يسمح به النظام؛ نرجو التكرم بدعم الباحثة لتطبيق أدوات دراستها (مقابلة – ورش عمل تدريبية – ملاحظة) على عينة من معلمات رياض الأطفال في روضتين في شمال مدينة الرياض، مع اشتراط موافقة ولي أمر الطفل وفقاً للنموذج المرفق. للتواصل مع الباحثة – الايميل : nhalshbili@pnu.edu.sa جوال: ٠٥٠٥٤١٣٦٩٢		

المكرمة مديرة إدارة رياض الأطفال   سلمها الله

السلام عليكم ورحمة الله وبركاته   وبعد،

بناءً على قرار سعادة مدير عام التعليم بمنطقة الرياض رقم ٣٨٩٢٠٧٩٣ وتاريخ ١٤٣٨/٦/٢٣هـ بشأن تفويض الصلاحية لإدارة التخطيط والتطوير لتسهيل مهمة الباحثين والباحثات وحيث تقدمت الباحثة (الموضحة بياناتها أعلاه) بطلب تطبيق أداة الدراسة الميدانية على عينة الدراسة في نطاق إدارة التعليم بمنطقة الرياض، ونظراً لاكتمال الأوراق المطلوبة **نأمل تسهيل مهمتها** مع ملاحظة أن **الباحثة تتحمل مسؤولية جمع البيانات والحفاظ على سريتها لاستخدامها لأغراض البحث العلمي فقط**، ولا يعني سماح الإدارة العامة للتعليم، موافقتها على مشكلة البحث أو على الطرق والأساليب المستخدمة ومعالجتها.

والله الموفق

عنه / المساعدة
مدير إدارة التخطيط والتطوير
د. بدرية المصري
١٤٤٣/٣/٢٩
محمد بن إبراهيم الزيدي

ك. الجبالي

Appendix B: Pilot Study Materials

1-Letter to the School Principal

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative (Pilot Study)

Dear Principal,

My name is Norah and I am a lecturer at PNU. I am currently on a career break while undertaking a PhD scholarship funded by the Ministry of Education. I am planning a research project in a kindergarten. The aim of this project is to develop teacher-child interaction quality, focusing on pedagogical (interaction) strategies that teachers can use to develop the quality of their interactions with children. This project takes the form of a professional development (PD) initiative that I have designed based on early childhood education literature.

The PD initiative is designed to be suitable for any evidenced-based curriculum, including the self-learning curriculum used in your kindergarten. The PD contains 4 workshops during school hours, including discussion and reflection. Each workshop will take 2-3 hours to complete. I will deliver this PD and support the implementation of the interaction strategies. I would like to invite your school to take part in this study. At any point in this study, teachers can withdraw from participating and their decision will be respected without question.

If your school decides to participate, teachers will be asked to attend an individual interviews in Week 1 to know their perception of TCIQ. They will be asked, also, to use interaction strategies (introduced in a PD session) to interact with children throughout the school day. After being introduced to the strategy, teachers will be encouraged to implement the strategy for three weeks. I would like to observe the teachers' interactions with children and record notes of these interactions. These notes will form the basis of an individual reflective dialogue sessions. I would like to investigate the teacher' perspective on teacher-child interaction quality and the PD initiative individually (Week 6) and in a focus group (Week 6). My role in this study as a researcher is not just mentoring, I will be, also, learning with teachers and from them. I will implement the strategies in your school classes as well and ask teachers sometimes to take notes for later discussions.

The confidentiality of information provided will be kept within limitations of the law. My supervisors, Dr. Geraldine French and Prof. Padraig Ó Duibhir, and I hope that the quality of interaction in your school will develop as a result of participating in this study. We hope that you find the PD valuable and that the strategies prove useful to you in your school.

You are welcome to receive feedback on the project throughout the process and upon its completion. In any reports on the project, individual teachers' names and the name of the kindergarten will be replaced with pseudonyms to ensure anonymity. All recordings on the researcher's Dictaphone will be kept in a secure location in her office filing cabinet. Electronic data will be stored on a password-protected laptop. These data will be appropriately disposed of within five years, in accordance with the DCU Data Protection Policy.

If you have any questions or concerns, please contact me at any stage. Alternatively, you may wish to contact my supervisors and/or an independent person. If so, please contact the administration office using the details below. Thank you for considering participating in this study.

Norah Alshbili
norah.alshbili2@dcu.ie

REC Administration
Research Office
Dublin City University
Glasnevin
Dublin 9
Tel: (01) 7007816
Institutional Review Board (IRB)
Princess Nourah University, Riyadh
IRB@pnu.edu.sa
0548867916

(Translated)

نبذة تعريفية لمديرة الروضة

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمرة

(المرحلة الاستطلاعية)

عزيزتي مديرة الروضة .... حفظها الله،

اسمي نوره الشبيلي، محاضرة في جامعة الأميرة نورة بنت عبد الرحمن. اعمل حاليا على مشرع بحثي كجزء من دراستي للدكتوراه ضمن برنامج الاشراف المشترك بين جامعة الاميرة نوره وجامعة مدينة دبلن الايرلندية. الهدف من هذا المشروع هو تطوير جودة التفاعل بين المعلمة والطفل، مع التركيز على الاستراتيجيات التربوية (طرق التفاعل) التي يمكن للمعلمات استخدامها لتطوير جودة تفاعلهم مع الأطفال. يأخذ هذا المشروع شكل مبادرة للتطوير المهني المستمر والتي صممتها بناءً على بحوث ودراسات تعليم الطفولة المبكرة.

تم تصميم هذه المبادرة لتكون مناسبة لأي منهج تربوي خاص بالطفولة المبكرة، بما في ذلك منهج التعلم الذاتي المستخدم في رياض الأطفال السعودية الحكومية. تتكون هذه المبادرة من أربع ورش عمل عن بعد. ستستغرق كل ورشة حوالي ساعتين تقريبا بما في ذلك المناقشة والحوار. سأقدم البرنامج كاملا بنفسي وسأدعم المعلمات في تنفيذ استراتيجيات التفاعل في صفوفهم الافتراضية. في حال وافقتي على مشاركة مدرستك ومن ثم رغبتي بالانسحاب لأي سبب كان فسيتم احترام قرارك بدون أي أسئلة.

إذا قررت مدرستك المشاركة، فبجانب حضور المعلمات لورش العمل الأربع المذكورة سابقًا، سيُطلب من كل معلمة مقابلة فردية (عبر الهاتف) لمعرفة تصورها عن جودة التفاعل بين المعلمة والطفل. ستشمل الورش بشكل عام خمس استراتيجيات للتفاعل وستركز على استراتيجية واحدة وهي استراتيجية الأسئلة. سيُطلب من المعلمات استخدام استراتيجيات التفاعل التي تم تقديمها في ورش العمل مع الأطفال خلال الفصول الافتراضية عبر الإنترنت كلما سمحت الفرصة بذلك. كما وارغب ان سمحتي لي بحضور بعض الدروس عبر الإنترنت لملاحظة تفاعل المعلمات مع الأطفال وتدوين بعض الملاحظات حول هذه التفاعلات. ستشكل هذه الملاحظات أساسًا لجلسة حوار فردية مع كل معلمة في الأسبوع السادس من المبادرة. كما وأود أيضًا أن أستقصي وجهة نظر المعلمات حول جودة التفاعل بين المعلمة والطفل وهذه المبادرة بشكل عام الأسبوع السادس بشكل فردي وفي مجموعة في الأسبوع السابع.

واحيطك علما بانه سيتم الاحتفاظ بسرية المعلومات في حدود القانون. كما ونتمنى انا والمشرفين علي الدكتورة French والبروفيسور Ó Duibhir أن تتطور جودة التفاعل في روضتك نتيجة للمشاركة في هذه الدراسة و نأمل أن تكون المبادرة و الاستراتيجيات المقدمة فيها مفيدة لروضتكم.

كما ونرحب بتلقي التعليقات على المبادرة طوال تطبيقها وعند اكتمالها. ونحيطك علما بانه في أي تقارير عن المبادرة، سيتم استبدال أسماء المعلمات واسم الروضة بأسماء مستعارة لضمان عدم الكشف عن الهوية. سيتم تخزين البيانات الإلكترونية على كمبيوتر محمول مشفر ومحمي بكلمة مرور وسيتم التخلص من هذه البيانات بشكل مناسب في غضون خمس سنوات، وفقًا لسياسة حماية بيانات في جامعة مدينة دبلن الأيرلندية.

إذا كانت لديك أي أسئلة أو استفسارات، فيرجى الاتصال بي في أي مرحلة من مراحل المبادرة. وفي حال رغبتك الاتصال بالمشرفين على البحث و/ أو شخص مستقل فأرجو من حضرتك عدم التردد بالتواصل عبر الأرقام وعناوين البريد الالكترونية ادناه.

شاكرة ومقدرة تعاونك

نوره حمد الشبيلي

norah.alshbili2@dcu.ie

مكتب البحوث بجامعة مدينة دبلن- ايرلند REC

Email: rec@dcu.ie

جامعة الاميرة نوره بنت عبدالرحمن, مجلس مراجعة البحوث (IRB)

IRB@pnu.edu.sa

0548867916

2-Plain Language Statement for Teachers

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative (Pilot Study)

Dear Teacher,

My name is Norah and I am a lecturer at PNU. I am currently on a career break while undertaking a PhD scholarship funded by the Ministry of Education. I am planning a research project in a kindergarten. The aim of this project is to develop teacher-child interaction quality, focusing on pedagogical (interaction) strategies that teachers can use to develop the quality of their interactions with children. This project takes the form of a professional development (PD) initiative that I have designed based on early childhood education literature.

The PD initiative is designed to be suitable for any evidence-based curriculum, including the self-learning curriculum that you used in your kindergarten. The PD contains four workshops, including discussion and reflection. Each workshop will take 2-3 hours to complete. I will deliver this PD and support the implementation of the interaction strategies on site. I would like to invite you to take part in this study. At any point in this study, you can withdraw from participating and your decision will be respected without question.

If you decide to participate, you will be asked to attend an individual interview in Week 1 to know your perception of teacher-child interaction quality (TCIQ). The workshops will focus on some strategies for interacting with children and you will be asked to use these strategies to interact with the children in your class whenever the opportunity allows. I would like to observe your interactions with children and record notes of these interactions. These notes will form the basis of an individual reflective dialogue sessions. Also, I would like to investigate your perspective on TCIQ and the PD initiative, individually and in a focus group Week 6. My role in this study as a researcher is not just mentoring, I will also be learning with you and from you. I will implement the strategies in your class as well and ask you sometimes to take notes for later discussions.

The confidentiality of information provided will be kept within limitations of the law. My supervisors, Dr. Geraldine French and Prof. Pádraig Ó Duibhir, and I hope that the quality of interaction in your class will develop as a result of participating in this study. We hope that you find the PD valuable and that the strategies prove useful to you in your teaching.

You are welcome to receive feedback on the project throughout the process and upon its completion. In any reports on the project, individual teachers' names and the name of the kindergarten will be replaced with pseudonyms to ensure anonymity. All recordings on the researcher's Dictaphone will be kept in a secure location in her office filing cabinet. Electronic data will be stored on a password-protected and encrypted laptop. These data will be appropriately disposed of within five years, in accordance with the DCU Data Protection Policy.

If you have any questions or concerns, please contact me at any stage. Alternatively, you may wish to contact my supervisors and/or an independent person. If so, please contact the administration office using the details below. Thank you for considering participating in this study.

    Norah Alshbili
    norah.alshbili2@dcu.ie
    REC Administration
    Research Office
    Dublin City University
    Glasnevin

Dublin 9
Tel: (01) 7007816
Institutional Review Board (IRB)
Princess Nourah University, Riyadh
IRB@pnu.edu.sa
0548867916

(Translated)

نبذة تعريفية للمعلمات عن المبادرة (المرحلة الاستطلاعية)

تصورات معلمات رياض الأطفال السعوديات حول جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمر

عزيزتي المعلمة،

اسمي نوره الشبيلي، محاضرة في جامعة الأميرة نورة بنت عبد الرحمن. اعمل حاليا على مشرع بحثي كجزء من دراستي للدكتوراه ضمن برنامج الاشراف المشترك بين جامعة الاميرة نوره وجامعة مدينة دبلن الأيرلندية. الهدف من هذا المشروع هو تطوير جودة التفاعل بين المعلمة والطفل، مع التركيز على الاستراتيجيات التربوية (طرق التفاعل) التي يمكن للمعلمات استخدامها لتطوير جودة تفاعلهم مع الأطفال. يأخذ هذا المشروع شكل مبادرة للتطوير المهني المستمر والتي صممتها بناءً على بحوث ودراسات تعليم الطفولة المبكرة.

تم تصميم هذه المبادرة لتكون مناسبة لأي منهج تربوي خاص بالطفولة المبكرة، بما في ذلك المنهج المستخدم في روضتكم. تتكون هذه المبادرة من اربعة ورش عمل عن بعد. ستستغرق كل ورشة حوالي ساعتين تقريبا. سأقدم البرنامج كاملا بنفسي وسأدعمك في تنفيذ استراتيجيات التفاعل في صفك. في حال وافقتي على المشاركة ومن ثم رغبتي بالانسحاب لأي سبب كان فسيتم احترام قرارك بدون أي أسئلة.

إذا قررت المشاركة، فبجانب حضور ورش العمل الأربع المذكورة سابقًا، سوف أجري معك مقابلة عبر الهاتف قبل البدء بورش العمل لمعرفة تصورك حول جودة التفاعل بين المعلمة والطفل. ستركز الورش على بعض استراتيجيات التفاعل مع الأطفال وسيُطلب منك استخدام هذه الاستراتيجيات للتفاعل مع الأطفال في صفك كلما سمحت الفرصة. كما وارغب ان سمحتي لي بالحضور في صفك لملاحظة تفاعلاتك مع الأطفال وتدوين بعض الملاحظات حول هذه التفاعلات. ستشكل هذه الملاحظات أساسًا لجلسات حوار أسبوعية قصيرة تدور حول جودة التفاعل مع الأطفال وكيفية الاستفادة من أفكار واهتمامات الأطفال لتنفيذ بعض الانشطة. كما وأود أيضًا أن أستقصي وجهة نظرك حول جودة التفاعل بين المعلمة والطفل وهذه المبادرة بشكل عام بعد انتهاء المبادرة بشكل فردي وفي مجموعة أيضا.

واحيطك علما بانه سيتم الاحتفاظ بسرية المعلومات في حدود القانون. نتمنى انا والمشرفين علي الدكتورة French والبروفيسور Ó Duibhir أن تتطور جودة التفاعل في فصلك نتيجة للمشاركة في هذه الدراسة و نأمل أن تكون المبادرة و الاستراتيجيات المقدمة فيها مفيدة لك في عملك مع الأطفال.

كما ونرحب بك لتلقي التعليقات على المبادرة طوال تطبيقها وعند اكتمالها. ونحيطك علما بانه في أي تقارير عن المبادرة، سيتم استبدال أسماء المعلمات واسم الروضة بأسماء مستعارة لضمان عدم الكشف عن الهوية. سيتم تخزين البيانات الإلكترونية على كمبيوتر محمول مشفر ومحمي بكلمة مرور وسيتم التخلص من هذه البيانات بشكل مناسب في غضون خمس سنوات، وفقًا لسياسة حماية بيانات في جامعة مدينة دبلن الأيرلندية.

إذا كانت لديك أي أسئلة أو استفسارات، فيرجى الاتصال بي في أي مرحلة من مراحل المبادرة. وفي حال رغبتك الاتصال بالمشرفين على البحث و/ أو شخص مستقل فأرجو من حضرتك عدم التردد بالتواصل عبر الأرقام وعناوين البريد الالكترونية ادناه.

شاكرة ومقدرة تعاونك،،
نوره حمد عبدالله الشبيلي
norah.alshbili2@dcu.ie
مكتب البحوث بجامعة مدينة دبلن- ايرلند REC
Email: rec@dcu.ie
(IRB) جامعة الاميرة نوره بنت عبدالرحمن, مجلس مراجعة البحوث
IRB@pnu.edu.sa
0548867916

3-Informed Consent Form for Teachers

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

(Pilot Study)

Purpose of the Research

The aim of this research is to develop teacher-child interaction quality (TCIQ) through job-embedded professional development (PD).

Requirements of Participating in This Study

You will attend 4 PD sessions that focus on one interaction strategy, which you will be asked to implement in your class for three weeks during the second semester (January-February 2022). If you take part in this study, you will be expected to attend three PD workshops. During the initiative, you will be encouraged to keep a diary to note your learning experiences and thoughts for use during interviews and reflective dialogue sessions. You, as a class teacher, will implement the strategy if it is suitable for a given situation. The strategy will be discussed in a PD session, and after three weeks, you will have an individual stimulated reflective dialogue session with the researcher. You will have individual interview in the first week of the semester, another individual interview in Week 6, and an interview in a focus group after the PD is completed in Week 6. In the individual interviews, you will express your perceptions of TCIQ and the PD in general. In the focus group interview, you will express if the PD has changed anything in your perceptions and/or practices.

Every effort will be made to protect the anonymity of all participants. The names of teachers and the school will not be used in any report. This guarantee of anonymity is promised within the legal limits of data anonymity.

Confirmation That Involvement in the Study Is Voluntary

I am aware that if I agree to take part in this study, I can withdraw from participation at any stage. There will be no penalty for withdrawing before all stages of the study have been completed. I have read and understood the information in this form. The researchers have answered my questions and concerns, and I have a copy of this consent form. Therefore, I give my consent to take part in this research project.

Please complete the following (circle Yes or No for each question):

I have read the Plain Language Statement (or had it read to me).	Yes/No
I understand the information provided.	Yes/No
I understand the information provided in relation to data protection.	Yes/No
I have had an opportunity to ask questions and discuss this study.	Yes/No
I have received satisfactory answers to all my questions.	Yes/No
I am aware that my interview will be audiotaped.	Yes/No

Teacher's Signature: _____

Name in Block Capitals: _____

Date: _____

نموذج موافقة المعلمات على المشاركة في الدراسة

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمر

الهدف من الدراسة

تطوير جودة التفاعل بين المعلمة والطفل من خلال مبادرة للتطوير المهني المستمر

متطلبات المشاركة في هذه الدراسة

تركز هذه الدراسة على جودة التفاعل بين المعلمة والطفل بما في ذلك استراتيجيات التفاعل التي سيُطلب منك تنفيذها في صفك خلال الفصل الدراسي الثاني من العام الدراسي الحالي (١٤٤٣-١٤٤٤). إذا شاركت في هذه الدراسة ، فمن المتوقع أن تحضري اربع ورش عمل عن بعد مدة كل منها ساعتين. ستقومين بتطبيق الاستراتيجيات التي نتناولها في ورش العمل كلما سمحت الفرصة خلال تفاعلك مع الأطفال في مختلف المواقف التعليمية، علما بأننا سنركز في هذه الدورة على استراتيجية الأسئلة.

واشجعك على كتابة ملاحظاتك والاحتفاظ بها طوال فترة البرنامج لاستخدامها خلال المقابلات وجلسات الحوار الفردية في الأسبوع السادس وجلسة نقاش جماعية في الأسبوع السادس.

سيتم بذل كل جهد لحماية سرية جميع المشاركات. ولن يتم استخدام أسماء المعلمات او المدرسة في أي تقرير عن هذه الدراسة

التأكيد على أن المشاركة في الدراسة طوعية

أدرك أنني إذا وافقت على المشاركة في هذه الدراسة ، فيمكنني الانسحاب من المشاركة في أي مرحلة. لن تكون هناك عقوبة على الانسحاب قبل الانتهاء من جميع مراحل الدراسة. لقد قرأت وفهمت المعلومات الواردة في هذا النموذج. أجابت الباحثة على أسئلتي ومخاوفي، ولدي نسخة إلكترونية من نموذج الموافقة هذا. لذلك، أوافق على المشاركة في هذا المشروع البحثي

الرجاء إكمال ما يلي بوضع دائرة على "نعم" أو "لا" لكل سؤال:

لقد قرأت النبذة التعريفية (أو قرأته لي الباحثة). نعم / لا

أنا أفهم المعلومات المقدمة. نعم / لا

أفهم المعلومات المقدمة فيما يتعلق بحماية البيانات. نعم / لا

لقد أتيحت لي الفرصة لطرح الأسئلة ومناقشة هذه الدراسة. نعم / لا

لقد تلقيت إجابات مرضية على جميع أسئلتي. نعم / لا

توقيع المعلمة :..

الاسم :..

التاريخ:..

4- Plain Language Statement for Parents (pilot study)
   Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

Dear Parents,

My name is Norah and I am a lecturer at PNU. I am currently on a career break while undertaking a PhD scholarship funded by the Ministry of Education. I am planning a research project in a kindergarten. The aim of this project is to develop teacher-child interaction quality, focusing on teaching strategies that teachers can use to develop the quality of their interactions with children. This project takes the form of a professional development (PD) initiative that I have designed based on early childhood education literature. I will deliver this PD and support the teachers during the implementation of the interaction strategies in your child's class.

For academic research purposes, I will take notes of the children during their interaction with their teachers, your child's name will not be mentioned anywhere. At any point in this study, you can withdraw your child from participating and your decision will be respected without question. When you chose to withdraw your child, that means your child will remain in class and involve in the class activities however the researcher will take notes of the other children's interactions with the teachers.

The confidentiality of information provided will be kept within limitations of the law. My supervisors, Dr. Geraldine French and Prof. Padraig Ó Duibhir, and I hope that the quality of teacher-child interaction in your child's class will develop as a result of participating in this study.

Confidentiality will be ensured at all times. In any reports on the project, individual children's names and that of the school will not be used in order to safeguard anonymity. However, it should be noted that the confidentiality of information provided cannot always be guaranteed by the researcher and can only be protected within the limitations of the law. All notes will be kept in a secure, locked location. Electronic data will be held on a password-protected and encrypted computer. All data will be disposed of appropriately within five years, in accordance with DCU Data Protection Policy.

You are welcome to receive feedback on the project throughout the process and upon its completion. If you have any questions or concerns, please do not hesitate to contact me at any stage. Alternatively, you may wish to contact my supervisors and/or an independent person. If so, please contact the administration's office using the details below.

Thank you for your time and consideration.
Norah Alshbili
norah.alshbili2@dcu.ie
REC Administration
Research Office
Dublin City University
Glasnevin
Dublin 9
Tel: (01) 7007816
Institutional Review Board (IRB)
Princess Nourah University, Riyadh
IRB@pnu.edu.sa
0548867916

نبذة تعريفية لاولياء الآمور

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمرة

الأباء الأعزاء،

اسمي نوره وأنا محاضرة في جامعة الأميرة نورة. أنا حاليًا في إجازة مهنية أثناء حصولي على منحة دكتوراه بتمويل من وزارة التعليم. أخطط لمشروع بحثي في رياض الأطفال. يهدف هذا المشروع إلى تطوير جودة التفاعل بين المعلمة والطفل، مع التركيز على استراتيجيات التدريس التي يمكن استخدامها المعلمات من تطوير جودة تفاعلهن مع الأطفال. قمت بتصميم مبادرة للتطوير المهني للمعلمات لتطوير استراتيجيات التفاعل مع الأطفال في صف طفلك.

في أي وقت في هذه الدراسة، يمكنك سحب طفلك من المشاركة وسيتم احترام قرارك دون سؤال. عندما تختار سحب طفلك، فهذا يعني أن طفلك سيبقى في الفصل وسيشارك في أنشطة الفصل ولكن الباحثة ستستمر في ملاحظة بقية الأطفال.

سيتم الحفاظ على سرية المعلومات المقدمة ضمن حدود القانون. المشرفين عليّ، الدكتورة جيرالدين فرينش والبروفيسور بادريج أو دوبيير، وآمل أن تتطور جودة التفاعل بين المعلمات والأطفال في صف طفلك نتيجة للمشاركة في هذه الدراسة.

وسيتم ضمان السرية في جميع الأوقات. في أي تقارير عن المشروع، لن يتم استخدام أسماء الأطفال وأسماء المدرسة من أجل الحفاظ على عدم الكشف عن هويتهم. ومع ذلك، تجدر الإشارة إلى أن سرية المعلومات المقدمة لا يمكن دائمًا ضمانها من قبل الباحثة ولا يمكن حمايتها إلا ضمن حدود القانون. سيتم الاحتفاظ بجميع الملاحظات والبيانات الإلكترونية على جهاز كمبيوتر محمي بكلمة مرور ومشفر. سيتم التخلص من جميع السجلات والبيانات بشكل مناسب في غضون خمس سنوات، وفقًا لسياسة حماية البيانات في.DCU

أنتم مدعوون لتلقي تعليقات حول المبادرة طوال فترة تنفيذها وعند اكتمالها. إذا كان لديك أي أسئلة أو استفسارات، فلا تتردد في الاتصال بي في أي مرحلة. وبدلاً من ذلك، قد ترغب في الاتصال بالمشرفين و/أو شخص مستقل. إذا كان الأمر كذلك، يرجى الاتصال بمكتب الإدارة باستخدام التفاصيل أدناه.

شاكرة ومقدرة تعاونكم
نوره حمد الشبيلي
norah.alshbili2@dcu.ie
مكتب البحوث بجامعة مدينة دبلن- ايرلند REC
Email: rec@dcu.ie
جامعة الاميرة نوره بنت عبدالرحمن, مجلس مراجعة البحوث (IRB)
IRB@pnu.edu.sa
0548867916

5- Informed Consent Form for Parents

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

Purpose of the Research

The aim of this research is to develop teacher-child interaction quality through job-embedded professional development (PD).

Requirements of Participating in This Study

Your child's teachers will attend PD workshops on interaction strategies, which they will be asked to implement in your child's class during (January-February 2022). If your child takes part in this study, I will take notes of his/her interaction with the teachers. All notes will be taken strictly for the purposes of the study. Every effort will be made to protect the anonymity of all participants. The names of children, teachers, and the school will not be used in any report. This guarantee of anonymity is promised within the legal limits of data anonymity.

Confirmation That Involvement in the Study Is Voluntary

I am aware that if I agree to allow my child to take part in this study, my child can withdraw from participation at any stage. There will be no penalty for withdrawing before all stages of the study have been completed.

Parent, Please Complete the Following (Circle Yes or No for Each Question)

I have read (or had read to me) the Plain Language Statement   Yes/No

I understand the information provided   Yes/No

I have had an opportunity to ask questions and discuss this study   Yes/No

I have received satisfactory answers to all my questions   Yes/No

I have read and understood the information in this form. The researchers have answered my questions and concerns, and I have a copy of this consent form. Therefore, I give consent for my child to take part in this research project.

Parent's Signature: _____

Name in Block Capitals: _____

Child's Name in Block Capitals: _____

Date: _____

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمرة

الغرض من البحث

الهدف من هذا البحث هو تطوير جودة التفاعل بين المعلمة والطفل من خلال مبادرة للتطوير المهني

متطلبات المشاركة في هذه الدراسة

ستحضر معلمة طفلك ورش عمل للتطوير المهني حول استراتيجيات التفاعل، والتي سيُطلب منها تنفيذها في فصل طفلك خلال الفصل الدراسي (الثالث). إذا شارك طفلك في هذه الدراسة، فسيتم تدوين ملاحظات أثناء تفاعله مع المعلمات لأغراض الدراسة. سيتم بذل كل جهد لحماية هوية جميع المشاركين. لن يتم استخدام أسماء الأطفال والمعلمات والمدرسة في أي تقرير. يتم الوعد بضمان عدم الكشف عن هوية طفلك ضمن الحدود القانونية لإخفاء هوية البيانات.

التأكيد على أن المشاركة في الدراسة طوعية

أدرك أنه إذا وافقت على السماح لطفلي بالمشاركة في هذه الدراسة، فيمكن لطفلي الانسحاب من المشاركة في أي مرحلة. لن تكون هناك عقوبة على الانسحاب قبل الانتهاء من جميع مراحل الدراسة.

يرجى من ولي الأمر إكمال ما يلي (ضع دائرة حول نعم أو لا لكل سؤال)

لقد قرأت (أو قرأت لي) النبذة التعريفية نعم/لا

أفهم المعلومات المقدمة نعم/لا

لقد أتيحت لي الفرصة لطرح الأسئلة ومناقشة هذه الدراسة نعم/لا

لقد تلقيت إجابات مرضية لجميع أسئلتي نعم/لا

لقد قرأت وفهمت المعلومات الواردة في هذا النموذج. لقد أجاب الباحثون على أسئلتي ومخاوفي، ولدي نسخة من نموذج الموافقة هذا. ولذلك، أمنح موافقتي لطفلي على المشاركة في هذا المشروع البحثي.

توقيع ولي الامر _____

اسم الطفل_____

اسم ولي الامر_____

تاريخ_____

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6-Pilot Study ABC LD

ABC LD (Arena Blended Connected Learning Design)

This storyboard will help you to visually map out the intended learning experience of your module in a simple Google document format. You can choose to storyboard week by week or in blocks of weeks, if you prefer (e.g. Week 1, Weeks 2-4, Week 5, Week 6-12).

1. Select the relevant learning type colour coded tab e.g. Acquisition, [Acquisition] from the block underneath, and copy and paste into the relevant space on the storyboard grid.
2. Referring to the back of learning type cards (In the Learning Types reference table below), note the learning activities underneath the learning type header.

Study title: **Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality before and after a Continuing Professional Development Initiative (main study workshops plan)**

Participants: 9 Kindergarten teachers

Date: 10/03-16/06-2022

Workshop/ Topic	Content	Learning objectives	Learning design	Learning experiences from the participant's perspective	Reflections	Links	Notes
Workshop 1 - Introduction to the initiative 4	• Introduction to the initiative: initiative aims, stages, participants' role during the initiative (including how to take reflection notes) • Goals of the Ministry of Education and education's role in Saudi Vision 2030. • ECEC quality, especially TCIQ (importance, meaning, indicators, and measurements)	By the end of the workshop, the teachers should achieve the following objectives: • Know the initiative goals and stages. • Recognize the goals of the Ministry of Education and education's role in Saudi Vision 2030. • Know their roles as participants in the initiative. • Know how to write reflection notes during the workshops and in class. • Write their reflection notes during the workshop • Know the importance, meaning, indicators, and measurements of ECEC quality, especially TCIQ. • Recognize high-quality TCIQ practices.	Acquisition Discussion Practice Production	**Before the workshop:** • Reading short article (one page) • Watching short videos • Reading short handout (one page) A short article, handout, and videos have been sent via WhatsApp group to the participants prior to the workshop. Participants have been asked to prepare some questions and comments to be discussed during the workshop. **During the workshop:** - Listening to the presentation (PowerPoint) - Watching a video as an example of high-quality TCI (Teacher-Child Interaction) - Discuss as a group the characteristics of high-quality ECEC (focusing on TCI) - Discuss the article's main points/participants reflection. - Practice tacking reflection notes. Reviewing the learning objectives in the end of the workshop.	Reflection notes templates during workshop, in class, and sample) (Appendix A) Workshop 1 summary (Table 1) Icebreaking activities: 1-what is your dream job when you were a child? 2- Let's find the common things between us as a group (list of 20 things) Expectations clarification: What do you expect from this initiative? Feedback questions: - What keeps you interested and engaged during workshops like this? - How can I support your learning?	Interactions matter: What research says and what you can do! (article) (short summary in Arabic) Supporting children's active learning (video) Inspiring words by Crown Prince (video) Human Capability Development Program (video) Saudi Vision 2030 and Education (video)	The first workshop was an introductory meeting. During the meeting I found that the teachers have the time and the desire to learn more about the initiative so I presented the first workshop to all the kindergarten's teachers (19 teachers) 9 of them decided to participate in the study. Later I sent to those 9 the article, videos, and handout. We had a short discussion about the videos and the article on the WhatsApp group "Human Capability Development…" video was presented during the workshop

Workshop 2	Learning environment (indoor & outdoor)	By the end of the workshop, the teachers should achieve the following objectives:		Before the workshop:	Workshop 2 summary (Table 2)
- Learning environment	- The power of the environment - Organisation - Resources for play and learning - Environment and interactions	• Know the important role of learning environment in ECEC programme quality especially TCIQ. • Know the features of a high-quality learning environment (include how to choose materials that are appropriate for children's learning and development) • Know how to organise the learning environment to support children's learning and development (including playing areas) • know the importance of outdoor learning environment and how to design it appropriately for the development of children.	**Acquisition** **Discussion** **Practice** **Production**	- Reading short article - Watching short videos - Reading short handout During the workshop: □ Review workshop 1 □ Reminding the participants to write reflection notes □ Listening to the presentation (PowerPoint) □ Watching video examples of high-quality learning environment. □ Discuss as a group the characteristics of high-quality learning environment. □ Reviewing the learning objectives in the end of the workshop. After the workshop (teachers' tasks): - Task 1 Sketch the layout of your classroom areas, take some photos of these areas, and write a plan for how you can develop the learning environment based on what we discussed today. Prepare to discuss your plan with me (if you like) in an individual short meeting next week. Suggestion: for this task, you can ask children about their ideas and suggestions about how to improve their learning environment, what do they like/ don't like about their class/ playground?	Icebreaking questions (discussion activity): □ What did you enjoy playing with as a child? □ From your observations of children what do they like playing with? □ Think of your favourite place to shop what is it you like about it? (The answers will likely be the things you want are grouped together, there is a place for different materials, they are arranged attractively, there is order, light, space for movement, Activity (before presenting the features of high-quality learning environment) How Do Environments Affect You? There are certain places you like to go back? (The answers will likely be: maybe a favorite restaurant, a local park, a sporting arena or a good friend's home. What makes you want to go back? (The answers will likely be: this place makes me feel welcome or secure. the people in this place, the colors of the place, sunlight, the smells and sounds, furniture and accessories or temperature). • Feedback questions via Venno: □ Please rate today's work shop? (1-5 stars scale) □ Do you have any suggestion to improve the workshop?

Resources (right column links):

Living spaces-Indoor learning environments (summary in Arabic)

Environments & materials for supporting physical play (video)

Building Supportive Environments: Setting Rules and Expectations (video)

Anji Play - Barrels, Ladders, Sandbags (video)

Children at Play in Anji County, China

True play development Anji Kindergartens (video)

Children at Play in Anji County, China China (video)

Workshop 3	General introduction to pedagogical strategies in high-quality ECEC.	By the end of the workshop, the teachers should achieve the following objectives:	Activity type	Activity	Before the workshop / Summary
- General introduction to pedagogical (interaction) strategies in high-quality ECEC.	- Social and emotional interaction (characteristics & Importance) - Social and emotional – relationship building - pedagogical strategies definition and examples. - Choosing the appropriate pedagogical strategy in different situations	• Know the characteristics and importance of socially and emotionally supportive teacher-child interactions. • Recognize socially and emotionally supportive teacher-child interactions. • Know how to support children socially and emotionally. • Recognize pedagogical strategies in high-quality ECEC (definitions, examples) • Know the main factors that help in choosing the appropriate pedagogical strategy	Acquisition Discussion Practice Production	**Before the workshop:** • Reading short article • Watching short videos • Reading short handout • Discussing on WhatsApp (brief discussion about one of the videos) **During the workshop:** ▪ Listening to the presentation (PowerPoint) ▪ Discuss how to support children socially and emotionally. ▪ Watching video examples of high-quality pedagogical strategies in general. ▪ Discuss as a group high-quality pedagogical strategies ▪ Writing reflection notes (remind the participants in the beginning of the workshop) ▪ Reviewing the learning objectives in the end of the workshop. **After the workshop (teachers' task)** ▪ Observe your adult-child interaction during the next week ▪ Pay attention to pedagogical strategies that you use more frequently with children. Do you rely more on one particular strategy (e.g. questioning, feedback...etc.)? ▪ Make a note of one interaction that had an extended conversation (more than 3 turns), who initiated it, what was the topic, ▪ Writ (in your reflection notes) your thoughts and ideas about how to develop your interaction strategies. Be prepared to discuss your ideas and thoughts with the group next week. I will be more than happy if you want to discuss your ideas further with me individually.	**Before the workshop:** • Icebreaking activity: ▪ What did the children tell you about changes to the environment that they would like? ▪ Can you tell us about a relationship you had as child with an adult that was warm and fun? Workshop 3 summary (Table 3) Feedback questions via ~~????~~: ▪ Please rate today's work shop? (1-5 stars scale) ▪ Do you have any suggestion to improve the workshop?

Resources / Links:

10 Effective DAP Teaching Strategies (summary in Arabic)

5 Ways to Support Social–Emotional Development in Early Childhood (article, summary in Arabic)

Making salad (video)

Building Positive Relationships with Young Children (supporting social emotional development) (video)

I'm angry! I'm sad (Video)

Workshop 4 Questioning, feedback, discussing	Questioning, feedback, and discussion strategies.	By the end of the workshop, the teachers should achieve the following objectives:	Activity types	Main activities		Resources	Notes

Topic outline	Learning objectives	Activity type legend	Activities	Resources/Interaction	Notes

Topic outline

Questioning, feedback, and discussion strategies.

- Definition
- Questioning Feedback, and Discussing as a pedagogical interaction strategies.
- Importance of Questioning Feedback, and Discussing as a pedagogical interaction strategies
- Question types
- Using Questioning to Optimise Children's Learning
- Keys to using feedback to optimise children's learning (how & when).
- Key to using discussion as an interaction strategy to optimize children's learning.

Learning objectives

By the end of the workshop, the teachers should achieve the following objectives:

- Define questioning feedback, and discussing strategies.
- Know the importance of questioning feedback and discussing strategies.
- Recognize different types of questions.
- Know how to ask meaningful questions that optimize children's learning.
- Realize their own questioning style (strengths and weaknesses) in using questions to promote children's learning.
- Know the keys to using feedback to optimise children's learning (how & when).
- Know the keys to using discussion as an interaction strategy to optimize children's learning.

Activity types (legend): Acquisition | Discussion | Practice | Production

Activities

Before the workshop:
- Reading short article
- Watching short videos
- Reading short handout
- Discussing some of the videos via WhatsApp.

During the workshop:
- Listening to the presentation (PowerPoint)
- Watching video examples of questioning, feedback, and discussion interaction strategies.
- Discuss as a group questioning, feedback, discussing strategies as interaction strategies.
- Writing reflection notes (remind the participants in the beginning of the workshop)
- Reviewing the learning objectives in the end of the workshop.

After the workshop (teachers' task):
- Try to implement questioning, feedback, and discussing strategy whenever the educational situation is appropriate.
- Please don't hesitate to ask me any questions, discuss your thoughts, or ask me to help you in planning your teaching activities.
- I encourage you to write reflection notes, and I will be more than happy to discuss them with you in an individual meeting if you like.
- Try to realize your own questioning style, do you relay on open or close ended questions more?
- Print please the open ended questions sheet and put it in a place that you can see in your classroom to help you asking more open ended questions (Appendix B + Translated copy).
- Record (in your phone) some of your conversations with children and listen to them later (I will be happy to listen to them with you). I recommend that you record few minutes only for 2or 3 conversations during

Resources/Interaction

Before the workshop:
- Icebreaking activity (Vevox): What are the main strategies that you use in your class to interact with children? (Word cloud to find out the main strategies that teachers are using to interact with children)

During the workshop:
- Present during the presentation/ send via WhatsApp a translated copy of open-ended questions reminder sheet (Appendix B)
- Reviewing the learning objectives in the end of the workshop.
- Feedback questions via Vevox:
  - Please rate today's work shop? (1-5 stars scale)
  - Do you have any suggestion to improve the workshop?

Resources (links):
- Skilful questioning: the beating heart of good pedagogy (article, summary in Arabic)
- Intentional teaching: Extending children's ideas (video)
- Why don't cows live in the water? (video)
- Making bread (video)
- Early Childhood Pedagogy: Questioning (video) (will be discussed via WhatsApp before the workshop)
- Play Based Learning: Open Ended Questions (video) (will be discussed via WhatsApp before the workshop)
- Sophie rolls bottles (video) (will be send and discussed after the workshop)

Notes

some videos will be discussed before/ after the workshop. I found that it is a good idea to keep the teachers engaged and think about the workshop content if I send some videos and articles and discuss them before, during, and after the workshops. During the pilot the teachers liked the idea and they didn't mind to interact and discuss via WhatsApp between the sessions.

Sending a reminder about the tasks via WhatsApp.

From my experience in the pilot study, the teachers did not send me any responds (recorded or written), however, when I talked to them during the post-interviews they told my some examples of their implementations of what they have learned and their trials to do the tasks that they been asked to do.

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the next week. Try to analyze your interaction regarding the strategies that we discussed today (feedback, discussing, questioning). Do you rely on one strategy more than the others? Do you think your discussion overall optimize the children's learning? Is there anything you wish that you did/said?

Acquisition

Collaboration

Discussion

Investigation

Practice

Production

Learning Types Reference:

Acquisition

- Books (including Loop Books)
- Journal Articles
- Websites
- Lectures/Slides
- Multimedia learning objects (e.g. H5P)
- Demonstrations
- Podcast/Audio Files
- Videos (e.g. recorded interviews or intro videos, YouTube clips)
- Web conference/Virtual Classrooms (e.g. Zoom, Adobe Connect)
- Glossaries (including Loop Glossary)

Universal Design for Learning (UDL) Prompts:
- Will materials be available within another class?
- Are a variety of formats available (not only text)?
- Will videos be captioned and transcripts provided?

See the DCU ABC to VLE+ App Wheel for further guidance on Acquisition activities.

Collaboration

- Discussion of others' outputs in physical classroom space and/or online
- Peer review cycle
- Building a joint output together (e.g. a wiki, website, glossary, report, presentation of video)

Universal Design for Learning (UDL) Prompts:
- Are learners given time to work on projects in class, as well as out of class?
- Are all learners prepared for engaging in group work? If so, how?
- Do learners have choice in their group project? Why/not?

See the DCU ABC to VLE+ App Wheel for further guidance on Collaboration activities.

Discussion

- Whole class discussions
- Small (pair or peer) discussions (e.g. think-pair, think-pair-share activities)
- Tutorials
- Seminars
- Online discussion activities (e.g. discussion Rooms, Twitter chat tools)
- Web conferencing/Virtual Classrooms
- Portfolio sharing/commenting
- Audience polls or surveys (e.g. Google Forms, Vevox, Kahoot, Slido/view, Zeetings)
- Glossary

Universal Design for Learning (UDL) Prompts:
- Are all types of learners (introverted/extroverted, different students) able to contribute?
- How will you check the level of knowledge/understanding in the class?
- Can people who more live-given contribute to the discussion?
- Is asynchronous/other time required for this technique?

See the DCU ABC to VLE+ App Wheel for further guidance on Discussion activities.

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Action Plan

Action Plan Item	Who/When
Teachers' individual interviews	Interviews 14-15/03--2022 (9 teachers)
CPD Workshop 1: (120 minutes)	Workshop (1) 10-03-2022 (all kindergarten teachers attended, 9 teachers decide to participate in the study)
Introduction/ Goals of the Ministry of Education and education's role in Saudi Vision 2030	
ECEC quality, especially TCIQ (importance, meaning, indicators, measurements)	
Focus group: 40 minutes	Focus group: 16-03-2022 (9 teachers attended)
CPD Workshop 2: (120 minutes)	Workshop (2) 16-03-2022 (9 teachers attended)
Learning environment (indoor and outdoor)	
CPD Workshop 3: (120 minutes)	Workshop (3) 17-03-2022 (9 teachers attended)
Pedagogical strategies (interaction strategies)	
Workshop 2 &3 implementation (in class)	20/30-03-2022
CPD Workshop 4: (120 minutes)	Workshop (4) 30-03-2022
Questioning, Feedback, and Discussion	31-03/ 13-04-2022

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Mentoring and implementation(in class)	
CPD Workshop 5: (120 minutes) **Problem- solving strategy** **Mentoring and implementation(in class)**	Workshop (5) 13-04-2022 14-04/ 11-05-2022
CPD Workshop 6: (120 minutes) **Sustained-shared thinking strategy** **Mentoring and implementation(in class)**	Workshop (6) 11-05-2022 12-05/9-06-2022
Second set of individual interviews (teachers' perceptions of TCIQ and the CPD initiative) Reflect on the CPD in general (focus group)	12,13, &14 -06-2022 16-06-2022

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Appendix A

Reflection Notes (Workshop)

Date _____

Workshop Number _____

Workshop main ideas:

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My reflection:

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Things I have learned today and will implement in my classroom:

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Reflection Notes (In Class)

Date _____

My goals:

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What did I do to achieve my goals?

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How do I feel?

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What can I do in the future to enhance my Practice?

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Reflection notes

Reflection is a powerful form of learning as it not only encourages the learner to make sense of what happened, it also encourages them to focus on what they could do differently next time. The act of completing written reflection notes not only brings subconscious learning into the conscious mind, but it also provides some discussion points for the next session with the mentor. A sample reflection note is shown below. Once again you may choose to change this.

Reflection notes can be completed after a key learning event related to an action point or any other event.

The mentor is encouraged to complete a reflection note after each discussion with the mentee to help improve their practice as a mentor

Sample reflection notes

Briefly describe the event that you are reflecting on

What did you think/feel whilst it was happening?

What have you learnt about the event, e.g. what you could have done differently or what did you do well?

What will you do differently as a result of reflecting on this event?

Sample Reflection Notes (Bournemouth University, n.d., p. 17)

French (2013) p.73, adapted from Dukes and Smith (2007, p. 5) and NCCA (2009).

Appendix C: Information Sheet

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

The aim of this research is to develop teacher-child interaction quality (TCIQ) through job-embedded professional development (PD).

The significance of high-quality early childhood education and care (ECEC) is gaining traction internationally (National Child Care Information and Technical Assistance Center, 2010; Organisation for Economic Co-Operation and Development, 2012), including Saudi Arabia (Ministry of Education, 2019). This is because high quality ECEC is needed to maximise the benefits programmes offer to early development and learning (Melhuish et al., 2015; Vandenbroeck et al., 2018). Teacher-child interactions have emerged as a key feature of ECEC quality (Burchinal et al., 2010). For instance, the National Association for the Education of Young Children (2009) states that effective teaching is intentional and teachers should employ various interaction strategies to support children's interests and ability in each learning domain. According to Yoshikawa et al. (2013), one of the most valuable characteristics of ECEC, especially kindergarten, are stimulating and supportive teacher-child interactions. Helping teachers develop their interaction strategies through mentoring in professional development (PD) could yield significant benefits. This claim is supported by studies showing effective PD included training on specific skills and job-embedded coaching, mentoring, or consultation (e.g., Pacchiano et al., 2016; Sheridan et al., 2009). This type of PD has improved learning outcomes in developmental areas such as literacy (Wasik & Hindman, 2011) and mathematics (Clements et al., 2011).

The present study investigates the perceptions of teachers in relation to teacher-child interaction quality (TCIQ) in a Saudi kindergarten. A relationship is expected between TCIQ and teaching strategies, with the hypothesis that PD can improve TCIQ.

The researcher designed an initiative using a PD model to improve TCIQ focusing on five interaction strategies. Classroom observation and teacher interviews will identify and explore changes, if any, in teacher's perceptions of TCIQ after the initiative.

Dissatisfied with traditional PD, researchers have recommended new perspectives that consider the inclusive nature of teacher learning (Halle et al., 2010a, 2010b; Zaslow et al., 2010a, 2010b). Despite the growing demands for PD that helps teachers support children's development and learning, research on ECEC PD remains underdeveloped with little determined about effective models (Han, 2012). According to Zaslow et al. (2010a, 2010b), most ECEC PD focuses on developing academic skills, mainly literacy, even though many studies have demonstrated the importance of teacher-child interaction (e.g., Downer et al., 2010a; Hamre, 2014; McNally & Slutsky, 2018; Melhuish et al., 2015), and no Saudi studies have focused on improving TCIQ through PD. In fact, PD for Saudi teachers in general and ECEC teachers in particular is limited and relies heavily on workshops that last one or two days. To address this gap, the present study will design a PD initiative to improve TCIQ in a Saudi kindergarten.

There is growing interest in improving ECEC by developing teachers' knowledge and skills. However, few studies have examined whether PD can make a sustainable improvement in teaching practices and outcomes (Rogers et al., 2020a; Yoshikawa et al., 2013). Rogers et al. (2020b) stressed the importance of improving ECEC teachers' pedagogical knowledge, understanding, and skills through accessible PD. The current study aligns with this global trend in research by offering specially designed on-site PD. Rogers et al. (2020b) concluded ECEC policymakers should invest in evidence-based PD. Thus, the findings could help the Saudi Ministry of Education plan PD for ECEC and add to the limited Saudi research in this field, while the model used could serve as a foundation for local PD in all Saudi kindergartens.

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمر

الهدف من هذا البحث هو تطوير نوعية التفاعل بين المعلمين والأطفال من خلال التطوير المهني المتضمن في الوظيفة،

تكتسب أهمية التعليم والرعاية العالية الجودة في مرحلة الطفولة المبكرة اهتماما دولياً (المركز الوطني للمعلومات والمساعدة التقنية في مجال رعاية الطفل، 2010؛ ومنظمة التعاون والتنمية في الميدان الاقتصادي، 2012)، بما في ذلك المملكة العربية السعودي (وزارة التعليم،٢٠١٩) والسبب في ذلك هو أن من الضروري أن تكون رياض الأطفال عالية الجودة لتحقيق أقصى قدر ممكن من الفوائد التي توفرها برامج تعليم الطفولة (Melhuish et al., 2015; Vandenbroeck et al., 2018).

برزت التفاعلات بين المعلمات والأطفال كسمة رئيسية من سمات جودة التعليم في مرحلة الطفولة المبكرة فعلى سبيل المثال، تنص الرابطة الوطنية لتعليم الأطفال (2009) على أن التعليم الفعال أمر مقصود وينبغي للمعلمات استخدام استراتيجيات تفاعل مختلفة لدعم مصالح الأطفال وقدرتهم في كل مجال من مجالات التعلم. ووفقاً لما ذكره يوشيكاوا وآخرون (2013)، فإن أحد أهم خصائص رياض الأطفال، هي التفاعلات التحفيزية والداعمة بين المعلمات والأطفال. ومن شأن مساعدة المعلمات على وضع استراتيجيات تفاعلهم عن طريق التوجيه في مجال التطوير المهني أن يحقق فوائد كبيرة. وهذه المطالبة مدعومة بدراسات تبين أن التدريب الفعال على المهارات المحددة التوجيه أو في الوظائف قد شمل تدريباً على مهارات محددة. (e.g., Pacchiano et al., 2016; Sheridan et al., 2009) .وقد أدى هذا النوع من البرامج إلى تحسين نتائج التعلم في مجالات إنمائية مثل اللغة (Wasik & Hindman, 2011) والرياضيات .(Clements et al., 2011) .

وتبحث هذه الدراسة تصورات المعلمات فيما يتعلق بنوعية التفاعل بين المعلمين والأطفال في روضة أطفال سعودية. ومن المتوقع أن يحسن البرنامج استراتيجيات التفاعل بين المعلمات والاطفال. قامت الباحثة بتصميم مبادرة باستخدام نموذج تطوير يركز على خمس استراتيجيات للتفاعل. وستحدد مراقبة الفصول الدراسية ومقابلات المعلمين وتستكشف التغييرات، إن وجدت، في تصورات المعلم لـ جودة التفاعل بين المعلمات والاطفال بعد المبادرة.

وقد أوصى الباحثون، الذين لا يرضون بالتطوير المهني التقليدي، بمنظورات جديدة تأخذ في الاعتبار الطبيعة الشاملة لتعلُّم المعلِّمين .(Halle et al., 2010a, 2010b; Zaslow et al., 2010a, 2010b) .وعلى الرغم من تزايد الطلبات على برنامج التطوير المهني التي تساعد المعلمات على دعم نمو الأطفال وتعلمهم، لا تزال البحوث المتعلقة

ببرامج تنمية الطفل في مرحلة الطفولة المبكرة تعمل على إيجاد نماذج تطوير مهني فعالة. (Han, 2012) ووفقاً لـ
(Zaslow et al. (2010a, 2010b، تركز معظم الدراسات علىبرامج التطوير المهني التي تهدف الى تطوير
المهارات الأكاديمية، واللغوية للاطفال، على الرغم من أن العديد من الدراسات أثبتت أهمية التفاعل بين المعلمين
والأطفال (على سبيل المثال، Downer et al., 2010a; Hamre, 2014; McNally & Slutsky, 2018;
(Malhuish et al., 2015، ولم تركز أي دراسات سعودية على تحسين جودة تفاعل المعلمات والاطفال. وفي الواقع،
فإن برنامج تطوير المعلمات السعوديات بصفة عامة وبرامج التعليم العالي لمعلمات مرحلة الطفولة المبكرة بصفة
خاصة محدودة لاتركز على جودة تفاعل العلمة والطفل. برامج التطوير المهني تعتمد اعتماداً كبيراً على ورش العمل
التي تستغرق يوماً أو يومين. ولمعالجة هذه الفجوة، صممت هذه الدراسة مبادرة من أجل تحسين جودة التفاعل في
روضة سعودية.

هناك اهتمام متزايد بتحسين التعليم في مرحلة الطفولة المبكرة عن طريق تطوير معارف المعلمات ومهاراتهم. ومع
ذلك، فإن عدداً قليلاً من الدراسات قد فحصت ما إذا كان باستطاعة برنامج تطوير التعليم أن يحقق تحسيناً مستداماً في
ممارسات التعليم ونتائجه. (Rogers et al., 2020a; Yoshikawa et al., 2013). وشدد روجرز وآخرون
(2020 ب) على أهمية تحسين المعارف التعليمية والمهارات لمعلمات الطفولة المبكرة من خلال تيسير التطوير المهني
وجعله متضمننا في عملهم. تتماشى الدراسة الحالية مع هذا الاتجاه العالمي في مجال البحوث عن طريق عرض تصميم
مبادرة تطوير مهني تنفذ في مقر الروضة. إن النتائج يمكن أن تساعد وزارة التعليم السعودية في تخطيط برامج التعليم
في مرحلة الطفولة المبكرة وفي التطوير المهني لمعلمات الطفولة المبكرة، وأن تضيف إلى البحوث السعودية المحدودة
في هذا مجال جودة الطفولة المبكرة، في حين أن النموذج المستخدم للتطوير المهني يمكن أن يستخدم في جميع رياض
الأطفال السعودية.

<div dir="rtl">

المملكة العربية السعودية
وزارة التعليم
الإدارة العامة للتعليم بمنطقة الرياض
إدارة التخطيط والتطوير

الرقم ....
التاريخ: ٢٩/ ٣/ ١٤٤٣هـ
الموضوعات : نموذج موافقة ولي الأمر

"نموذج موافقة ولي الأمر"

المكرم / ولي الأمر ....

السلام عليكم ورحمة الله وبركاته

نفيدكم أن الباحثة / نورة حمد عبدالله الشبيلي تقوم بتطبيق دراسة علمية بعنوان " تصورات معلمات رياض الأطفال السعوديات حول جودة التفاعل بين المعلمة والطفل قبل وبعد "مبادرة للتطوير المهني المستمر" " وعينة الدراسة: أطفال الروضات ومعلمات

علماً أن أداة الدراسة (ملاحظة) ستطبق فقط لتحقيق أهداف الدراسة العلمية للباحثة

لذا نأمل الكرم بالاطلاع وإبداء رأيكم في مشاركة ابنكم/ابنتكم ضمن عينة الدراسة.

والسلام عليكم ورحمة الله وبركاته

- -

اطلعت على الأداة المراد تطبيقها وأفيدكم:

□ بالموافقة   □ بعدم الموافقة

اسم ولي الأمر: ....

التوقيع : .... التاريخ : / / ١٤هـ

هذا النموذج يحفظ لدى المدرسة بعد توقيع ولي الأمر

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Appendix E: Letter to the School Principal

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

Dear Principal,

My name is Norah and I am a lecturer at PNU. I am currently on a career break while undertaking a PhD scholarship funded by the Ministry of Education. I am planning a research project in a kindergarten. The aim of this project is to develop teacher-child interaction quality, focusing on pedagogical (interaction) strategies that teachers can use to develop the quality of their interactions with children. This project takes the form of a professional development (PD) initiative that I have designed based on early childhood education literature.

The PD initiative is designed to be suitable for any evidenced-based curriculum, including the self-learning curriculum implemented in your school. The PD contains six workshops, including discussion and reflection. Each workshop will take 2-3 hours to complete. I will deliver this PD and support the implementation of the interaction strategies. I would like to invite your school to take part in this study. At any point in this study, teachers can withdraw from participating and their decision will be respected without question.

If your school decides to participate, teachers will be asked to attend an individual interview in Week 1 to know their perception of TCIQ. They will be asked, also, to use five interaction strategies (introduced in the PD sessions) to interact with children throughout the school day. After being introduced to each strategy, teachers will be encouraged to implement the strategy for 2 weeks before another strategy is introduced. However, they are encouraged to continue using all introduced strategies depending on the situation and their own evaluation of what is the best strategy to use in a particular interaction. I would like to observe the teachers' interactions with children and record notes of these interactions. These notes will form the basis of an individual reflective dialogue sessions (30-60 minutes for each session). At the end of the semester, I would like to investigate the teacher' perspective on teacher-child interaction quality and the PD initiative individually and in a focus group. My role in this study as a researcher is not just mentoring, I will be, also, learning with teachers and from them. I will implement the strategies in your school classes as well and ask teachers sometimes to take notes of my practices for later discussions.

The confidentiality of information provided will be kept within limitations of the law. My supervisors, Dr. Geraldine French and Prof. Padraig Ó Duibhir, and I hope that the quality of interaction in your school will develop as a result of participating in this study. We hope that you find the PD valuable and that the strategies prove useful to you in your school.

You are welcome to receive feedback on the project throughout the process and upon its completion. In any reports on the project, individual teachers' names and the name of the kindergarten will be replaced with pseudonyms to ensure anonymity. All data will be kept in a secure location in the researcher office filing cabinet. Electronic data will be stored on a password-protected laptop. These data will be appropriately disposed of within five years, in accordance with the DCU Data Protection Policy.

If you have any questions or concerns, please contact me at any stage. Alternatively, you may wish to contact my supervisors and/or an independent person. If so, please contact the administration office using the details below. Thank you for considering participating in this study.

Norah Alshbili

norah.alshbili2@dcu.ie
REC Administration
Research Office
Dublin City University
Glasnevin
Dublin 9
Tel: (01) 7007816
Institutional Review Board (IRB)
Princess Nourah University, Riyadh
IRB@pnu.edu.sa
0548867916

نبذة تعريفية لمديرة الروضة

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمرة

عزيزتي مديرة الروضة .... حفظها الله،

اسمي نوره الشبيلي، محاضرة في جامعة الأميرة نورة بنت عبد الرحمن. اعمل حاليا على مشرع بحثي كجزء من دراستي للدكتوراه ضمن برنامج الاشراف المشترك بين جامعة الاميرة نوره وجامعة مدينة دبلن الايرلندية. الهدف من هذا المشروع هو تطوير جودة التفاعل بين المعلمة والطفل، مع التركيز على الاستراتيجيات التربوية (طرق التفاعل) التي يمكن للمعلمات استخدامها لتطوير جودة تفاعلهم مع الأطفال. يأخذ هذا المشروع شكل مبادرة للتطوير المهني المستمر والتي صممتها بناءً على بحوث ودراسات تعليم الطفولة المبكرة.

تم تصميم هذه المبادرة لتكون مناسبة لأي منهج تربوي خاص بالطفولة المبكرة، بما في ذلك منهج التعلم الذاتي المستخدم في رياض الأطفال السعودية الحكومية. تتكون هذه المبادرة من ستة ورش عمل. ستستغرق كل ورشة حوالي ساعتين تقريبا بما في ذلك المناقشة والحوار. سأقدم البرنامج كاملا بنفسي وسأدعم المعلمات في تنفيذ استراتيجيات التفاعل في صفوفهم. في حال وافقتي على مشاركة مدرستك ومن ثم رغبتي بالانسحاب لأي سبب كان فسيتم احترام قرارك بدون أي أسئلة.

إذا قررت مدرستك المشاركة، فبجانب حضور المعلمات لورش العمل الستة المذكورة سابقًا، سيُطلب من كل معلمة مقابلة فردية (عبر الهاتف) لمعرفة تصورها عن جودة التفاعل بين المعلمة والطفل. ستشمل الورش بشكل عام خمس استراتيجيات. سيُطلب من المعلمات استخدام استراتيجيات التفاعل التي تم تقديمها في ورش العمل اثناء عملهم مع الأطفال كلما سمحت الفرصة بذلك. كما وارغب بالحضور مع المعلمات كمعلمة مساعدة لملاحظة تفاعل المعلمات مع الأطفال وتدوين بعض الملاحظات حول هذه التفاعلات. كما وأود أيضًا أن أستقصي وجهة نظر المعلمات حول جودة التفاعل بين المعلمة والطفل وهذه المبادرة بشكل عام الأسبوع الثالث عشر بشكل فردي وفي مجموعة في الرابع عشر.

واحيطك علما بانه سيتم الاحتفاظ بسرية المعلومات في حدود القانون. كما ونتمنى انا والمشرفين علي الدكتورة French والبروفيسور Ó Duibhir أن تتطور جودة التفاعل في روضتك نتيجة للمشاركة في هذه الدراسة و نأمل أن تكون المبادرة و الاستراتيجيات المقدمة فيها مفيدة لروضتكم.

كما ونرحب بتلقي التعليقات على المبادرة طوال تطبيقها وعند اكتمالها. ونحيطك علما بانه في أي تقارير عن المبادرة، سيتم استبدال أسماء المعلمات واسم الروضة بأسماء مستعارة لضمان عدم الكشف عن الهوية. سيتم تخزين البيانات الإلكترونية على كمبيوتر محمول مشفر ومحمي بكلمة مرور وسيتم التخلص من هذه البيانات بشكل مناسب في غضون خمس سنوات، وفقًا لسياسة حماية بيانات في جامعة مدينة دبلن الأيرلندية.

إذا كانت لديك أي أسئلة أو استفسارات، فيرجى الاتصال بي في أي مرحلة من مراحل المبادرة. وفي حال رغبتك الاتصال بالمشرفين على البحث و/ أو شخص مستقل فأرجو من حضرتك عدم التردد بالتواصل عبر الأرقام وعناوين البريد الالكترونية ادناه.

شاكرة ومقدرة تعاونك
نوره حمد الشبيلي

norah.alshbili2@dcu.ie
مكتب البحوث بجامعة مدينة دبلن- ايرلند REC
Email: rec@dcu.ie
جامعة الاميرة نوره بنت عبدالرحمن, مجلس مراجعة البحوث (IRB)
IRB@pnu.edu.sa
0548867916

Appendix F: Plain-Language Statement for Parents

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality before and after a Professional Development Initiative

Dear Parents,

My name is Norah and I am a lecturer at PNU. I am currently on a career break while undertaking a PhD scholarship funded by the Ministry of Education. I am planning a research project in a kindergarten. The aim of this project is to develop teacher-child interaction quality, focusing on teaching strategies that teachers can use to develop the quality of their interactions with children. This project takes the form of a professional development (PD) initiative that I have designed based on early childhood education literature. I will deliver this PD and support the teachers during the implementation of the interaction strategies in your child's class.

For academic research purposes, I will take notes of the children during their interaction with their teachers, your child's name will not be mentioned anywhere. At any point in this study, you can withdraw your child from participating and your decision will be respected without question. When you chose to withdraw your child, that means your child will remain in class and involve in the class activities however the researcher will take notes of the other children's interactions with the teachers.

The confidentiality of information provided will be kept within limitations of the law. My supervisors, Dr. Geraldine French and Prof. Padraig Ó Duibhir, and I hope that the quality of teacher-child interaction in your child's class will develop as a result of participating in this study.

Confidentiality will be ensured at all times. In any reports on the project, individual children's names and that of the school will not be used in order to safeguard anonymity. However, it should be noted that the confidentiality of information provided cannot always be guaranteed by the researcher and can only be protected within the limitations of the law. All notes will be kept in a secure, locked location. Electronic data will be held on a password-protected and encrypted computer. All data will be disposed of appropriately within five years, in accordance with DCU Data Protection Policy.

You are welcome to receive feedback on the project throughout the process and upon its completion. If you have any questions or concerns, please do not hesitate to contact me at any stage. Alternatively, you may wish to contact my supervisors and/or an independent person. If so, please contact the administration's office using the details below.

Thank you for your time and consideration.
Norah Alshbili
norah.alshbili2@dcu.ie
REC Administration
Research Office
Dublin City University
Glasnevin
Dublin 9
Tel: (01) 7007816
Institutional Review Board (IRB)
Princess Nourah University, Riyadh
IRB@pnu.edu.sa
0548867916

نبذة تعريفية لاولياء الآمور

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمرة

الأباء الأعزاء،

اسمي نوره وأنا محاضرة في جامعة الأميرة نورة. أنا حاليًا في إجازة مهنية أثناء حصولي على منحة دكتوراه بتمويل من وزارة التعليم. أخطط لمشروع بحثي في رياض الأطفال. يهدف هذا المشروع إلى تطوير جودة التفاعل بين المعلمة والطفل، مع التركيز على استراتيجيات التدريس التي يمكن استخدامها المعلمات من تطوير جودة تفاعلهن مع الأطفال. قمت بتصميم مبادرة للتطوير المهني للمعلمات لتطوير استراتيجيات التفاعل مع الأطفال في صف طفلك.

في أي وقت في هذه الدراسة، يمكنك سحب طفلك من المشاركة وسيتم احترام قرارك دون سؤال. عندما تختار سحب طفلك، فهذا يعني أن طفلك سيبقى في الفصل وسيشارك في أنشطة الفصل ولكن الباحثة ستستمر في ملاحظة بقية الأطفال.

سيتم الحفاظ على سرية المعلومات المقدمة ضمن حدود القانون. المشرفين عليّ، الدكتورة جيرالدين فرينش والبروفيسور بادريج أو دوبيير، وآمل أن تتطور جودة التفاعل بين المعلمات والأطفال في صف طفلك نتيجة للمشاركة في هذه الدراسة.

وسيتم ضمان السرية في جميع الأوقات. في أي تقارير عن المشروع، لن يتم استخدام أسماء الأطفال وأسماء المدرسة من أجل الحفاظ على عدم الكشف عن هويتهم. ومع ذلك، تجدر الإشارة إلى أن سرية المعلومات المقدمة لا يمكن دائمًا ضمانها من قبل الباحثة ولا يمكن حمايتها إلا ضمن حدود القانون. سيتم الاحتفاظ بجميع الملاحظات والبيانات الإلكترونية على جهاز كمبيوتر محمي بكلمة مرور ومشفر. سيتم التخلص من جميع السجلات والبيانات بشكل مناسب في غضون خمس سنوات، وفقًا لسياسة حماية البيانات في.DCU

أنتم مدعوون لتلقي تعليقات حول المبادرة طوال فترة تنفيذها وعند اكتمالها. إذا كان لديك أي أسئلة أو استفسارات، فلا تتردد في الاتصال بي في أي مرحلة. وبدلاً من ذلك، قد ترغب في الاتصال بالمشرفين و/أو شخص مستقل. إذا كان الأمر كذلك، يرجى الاتصال بمكتب الإدارة باستخدام التفاصيل أدناه.

شاكرة ومقدرة تعاونكم

نوره حمد الشبيلي

norah.alshbili2@dcu.ie

مكتب البحوث بجامعة مدينة دبلن- ايرلند REC

Email: rec@dcu.ie

جامعة الاميرة نوره بنت عبدالرحمن, مجلس مراجعة البحوث (IRB)

IRB@pnu.edu.sa

0548867916

Appendix G: Informed Consent Form for Parents

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

Purpose of the Research

The aim of this research is to develop teacher-child interaction quality through job-embedded professional development (PD).

Requirements of Participating in This Study

Your child's teacher will attend PD sessions on interaction strategies, which they will be asked to implement in your child's class during the semester (March-June 2022). If your child takes part in this study, the researcher will take notes of his/her interact with the teachers. All notes will be taken strictly for the purposes of the study. Every effort will be made to protect the anonymity of all participants. The names of children, teachers, and the school will not be used in any report. This guarantee of anonymity is promised within the legal limits of data anonymity.

Confirmation That Involvement in the Study Is Voluntary

I am aware that if I agree to allow my child to take part in this study, my child can withdraw from participation at any stage. There will be no penalty for withdrawing before all stages of the study have been completed.

Parent, Please Complete the Following (Circle Yes or No for Each Question)

I have read (or had read to me) the Plain Language Statement   Yes/No

I understand the information provided   Yes/No

I have had an opportunity to ask questions and discuss this study   Yes/No

I have received satisfactory answers to all my questions   Yes/No

I have read and understood the information in this form. The researchers have answered my questions and concerns, and I have a copy of this consent form. Therefore, I give consent for my child to take part in this research project.

Parent's Signature: _____

Name in Block Capitals: _____

Child's Name in Block Capitals: _____

Date: _____

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمرة

الغرض من البحث

الهدف من هذا البحث هو تطوير جودة التفاعل بين المعلمة والطفل من خلال مبادرة للتطوير المهني

متطلبات المشاركة في هذه الدراسة

ستحضر معلمة طفلك ورش عمل للتطوير المهني حول استراتيجيات التفاعل، والتي سيُطلب منها تنفيذها في

فصل طفلك خلال الفصل الدراسي (الثالث). إذا شارك طفلك في هذه الدراسة، فسيتم تدوين ملاحظات أثناء تفاعله مع

المعلمات لأغراض الدراسة. سيتم بذل كل جهد لحماية هوية جميع المشاركين. لن يتم استخدام أسماء الأطفال

والمعلمات والمدرسة في أي تقرير. يتم الوعد بضمان عدم الكشف عن هوية طفلك ضمن الحدود القانونية لإخفاء هوية

البيانات.

التأكيد على أن المشاركة في الدراسة طوعية

أدرك أنه إذا وافقت على السماح لطفلي بالمشاركة في هذه الدراسة، فيمكن لطفلي الانسحاب من المشاركة في

أي مرحلة. لن تكون هناك عقوبة على الانسحاب قبل الانتهاء من جميع مراحل الدراسة.

يرجى من ولي الأمر إكمال ما يلي (ضع دائرة حول نعم أو لا لكل سؤال)

لقد قرأت (أو قرأت لي) النبذة التعريفية نعم/لا

أفهم المعلومات المقدمة نعم/لا

لقد أتيحت لي الفرصة لطرح الأسئلة ومناقشة هذه الدراسة نعم/لا

لقد تلقيت إجابات مرضية لجميع أسئلتي نعم/لا

لقد قرأت وفهمت المعلومات الواردة في هذا النموذج. لقد أجاب الباحثون على أسئلتي ومخاوفي، ولدي نسخة

من نموذج الموافقة هذا. ولذلك، أمنح موافقتي لطفلي على المشاركة في هذا المشروع البحثي.

توقيع ولي الامر_____

اسم الطفل_____

اسم ولي الامر_____

التاريخ_____

Appendix H: Plain Language Statement for Teachers

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

Dear Teacher,

My name is Norah and I am a lecturer at PNU. I am currently on a career break while undertaking a PhD scholarship funded by the Ministry of Education. I am planning a research project in a kindergarten. The aim of this project is to develop teacher-child interaction quality, focusing on pedagogical (interaction) strategies that teachers can use to develop the quality of their interactions with children. This project takes the form of a professional development (PD) initiative that I have designed based on early childhood education literature.

The PD initiative is designed to be suitable for any evidence-based curriculum, including the self-learning curriculum used in your kindergarten. The PD contains six workshops. Each workshop will take 2-3 hours to complete. I will deliver this PD and support the implementation of the interaction strategies on site. I would like to invite you to take part in this study. At any point in this study, you can withdraw from participating and your decision will be respected without question.

If you decide to participate, you will be asked to attend an individual interview in Week 1 to know your perception of TCIQ. You will be asked, also, to use five interaction strategies (introduced in the PD sessions) to interact with children throughout the school day. After being introduced to each strategy, you will be encouraged to implement the strategy for 2 weeks before another strategy is introduced. However, you are encouraged to continue using all introduced strategies depending on the situation and your own evaluation of what is the best strategy to use in a particular interaction. I would like to observe your interactions with children and record notes of these interactions. These notes will form the basis of an individual reflective dialogue sessions. At the end of the semester, I would like to investigate your perspective on teacher-child interaction quality and the PD initiative, individually in and in a focus group in Week 14. My role in this study as a researcher is not just mentoring, I will also be learning with you and from you. I will implement the strategies in your class as well and ask you sometimes to take notes for later discussions.

The confidentiality of information provided will be kept within limitations of the law. My supervisors, Dr. Geraldine French and Prof Pádraig Ó Duibhir, and I hope that the quality of interaction in your class will develop as a result of participating in this study. We hope that you find the PD valuable and that the strategies prove useful to you in your teaching.

You are welcome to receive feedback on the project throughout the process and upon its completion. In any reports on the project, individual teachers' names and the name of the kindergarten will be replaced with pseudonyms to ensure anonymity. All data will be kept in a secure location in the researcher office filing cabinet. Electronic data will be stored on a password-protected and encrypted laptop. These data will be appropriately disposed of within five years, in accordance with the DCU Data Protection Policy.

If you have any questions or concerns, please contact me at any stage. Alternatively, you may wish to contact my supervisors and/or an independent person. If so, please contact the administration office using the details below. Thank you for considering participating in this study.

Norah Alshbili
norah.alshbili2@dcu.ie
REC Administration

Research Office
Dublin City University
Glasnevin
Dublin 9
Tel: (01) 7007816
Institutional Review Board (IRB)
Princess Nourah University, Riyadh
IRB@pnu.edu.sa
0548867916

تصورات معلمات رياض الأطفال السعوديات حول جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمر

نبذة تعريفية للمعلمات عن المبادرة

عزيزتي المعلمة،

اسمي نوره الشبيلي، محاضرة في جامعة الأميرة نورة بنت عبد الرحمن. اعمل حاليا على مشرع بحثي كجزء من دراستي للدكتوراه ضمن برنامج الاشراف المشترك بين جامعة الاميرة نوره وجامعة مدينة دبلن الأيرلندية. الهدف من هذا المشروع هو تطوير جودة التفاعل بين المعلمة والطفل، مع التركيز على الاستراتيجيات التربوية (طرق التفاعل) التي يمكن للمعلمات استخدامها لتطوير جودة تفاعلهم مع الأطفال. يأخذ هذا المشروع شكل مبادرة للتطوير المهني المستمر والتي صممتها بناءً على بحوث ودراسات تعليم الطفولة المبكرة.

تم تصميم هذه المبادرة لتكون مناسبة لأي منهج تربوي خاص بالطفولة المبكرة، بما في ذلك المنهج الإبداعي المستخدم في روضتكم. تتكون هذه المبادرة من ستة ورش عمل عن بعد. ستستغرق كل ورشة حوالي ساعتين تقريبا. سأقدم البرنامج كاملا بنفسي وسأدعمك في تنفيذ استراتيجيات التفاعل في صفك. في حال وافقتي على المشاركة ومن ثم رغبتي بالانسحاب لأي سبب كان فسيتم احترام قرارك بدون أي أسئلة.

إذا قررت المشاركة، فبجانب حضور ورش العمل الست المذكورة سابقًا، سوف أجري معك مقابلة قبل البدء بورش العمل لمعرفة تصورك حول جودة التفاعل بين المعلمة والطفل. المقابلة ستكون عبر الهاتف او وجها لوجه حسب ما تُفضِلين. ستركز الورش على بعض استراتيجيات التفاعل مع الأطفال وسيُطلب منك استخدام هذه الاستراتيجيات للتفاعل مع الأطفال في صفك كلما سمحت الفرصة. كما وارغب ان سمحتي لي بالحضور في صفك لملاحظة تفاعلاتك مع الأطفال وتدوين بعض الملاحظات حول هذه التفاعلات. ستشكل هذه الملاحظات أساسًا لجلسات حوار أسبوعية قصيرة تدور حول جودة التفاعل مع الأطفال وكيفية الاستفادة من أفكار واهتمامات الأطفال لتنفيذ بعض الانشطة. كما وأود أيضًا أن أستقصي وجهة نظرك حول جودة التفاعل بين المعلمة والطفل وهذه المبادرة بشكل عام بعد انتهاء المبادرة بشكل فردي وفي مجموعة أيضا.

واحيطك علما بانه سيتم الاحتفاظ بسرية المعلومات في حدود القانون. نتمنى انا والمشرفين علي الدكتورة French والبروفيسور Ó Duibhir أن تتطور جودة التفاعل في فصلك نتيجة للمشاركة في هذه الدراسة و نأمل أن تكون المبادرة و الاستراتيجيات المقدمة فيها مفيدة لك في عملك مع الأطفال.

كما ونرحب بك لتلقي التعليقات على المبادرة طوال تطبيقها وعند اكتمالها. ونحيطك علما بانه في أي تقارير عن المبادرة، سيتم استبدال أسماء المعلمات واسم الروضة بأسماء مستعارة لضمان عدم الكشف عن الهوية. سيتم تخزين البيانات الإلكترونية على كمبيوتر محمول مشفر ومحمي بكلمة مرور وسيتم التخلص من هذه البيانات بشكل مناسب في غضون خمس سنوات، وفقًا لسياسة حماية بيانات في جامعة مدينة دبلن الأيرلندية.

إذا كانت لديك أي أسئلة أو استفسارات، فيرجى الاتصال بي في أي مرحلة من مراحل المبادرة. وفي حال رغبتك الاتصال بالمشرفين على البحث و/ أو شخص مستقل فأرجو من حضرتك عدم التردد بالتواصل عبر الأرقام وعناوين البريد الالكترونية ادناه.

شاكرة ومقدرة تعاونك،،

نوره حمد عبدالله الشبيلي

norah.alshbili2@dcu.ie

مكتب البحوث بجامعة مدينة دبلن- ايرلند REC

Email: rec@dcu.ie

جامعة الاميرة نوره بنت عبدالرحمن, مجلس مراجعة البحوث (IRB)

IRB@pnu.edu.sa

0548867916

Appendix I: Informed Consent Form for Teachers

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

Purpose of the Research

The aim of this research is to develop teacher-child interaction quality (TCIQ) through job-embedded professional development (PD).

Requirements of Participating in This Study

You will attend PD workshops that focus on five interaction strategies, which you will be asked to implement in your class during the semester (March-June 2022). If you take part in this study, you will be expected to attend six PD. During the intervention, you will be encouraged to keep a diary of your learning experiences and thoughts for use during interviews and reflective dialogue sessions. You, as a class teacher, will implement the strategy that most suitable for a given situation. Each strategy will be discussed in a separate PD workshop, and after 2 weeks, you will have an individual stimulated reflective dialogue session with the researcher. You will have individual interview in first week of the semester, another individual interview in the end of the semester (Week 13), and an interview in a focus group after the PD is completed in Week 14. In the individual interview, you will express your perceptions of TCIQ and the PD in general. In the focus group interview, you will express if the PD has changed anything in your perceptions and/or practices.

Every effort will be made to protect the anonymity of all participants. The names of teachers and the school will not be used in any report. This guarantee of anonymity is promised within the legal limits of data anonymity.

Confirmation That Involvement in the Study Is Voluntary

I am aware that if I agree to take part in this study, I can withdraw from participation at any stage. There will be no penalty for withdrawing before all stages of the

study have been completed. I have read and understood the information in this form. The researchers have answered my questions and concerns, and I have a copy of this consent form. Therefore, I give my consent to take part in this research project.

Please complete the following (circle Yes or No for each question):

I have read the Plain Language Statement (or had it read to me). Yes/No

I understand the information provided. Yes/No

I understand the information provided in relation to data protection. Yes/No

I have had an opportunity to ask questions and discuss this study. Yes/No

I have received satisfactory answers to all my questions. Yes/No

Teacher's Signature: _____

Name: _____

Date: _____

نموذج موافقة المعلمات على المشاركة في الدراسة

تصورات معلمات رياض الأطفال السعوديات عن جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة

للتطوير المهني المستمرة

الهدف من الدراسة

تطوير جودة التفاعل بين المعلمة والطفل من خلال مبادرة للتطوير المهني المستمر

متطلبات المشاركة في هذه الدراسة

تركز هذه الدراسة على جودة التفاعل بين المعلمة والطفل بما في ذلك استراتيجيات التفاعل التي سيُطلب منك تنفيذها في صفك خلال الفصل الدراسي الثالث من العام الدراسي الحالي (١٤٤٣-١٤٤٤). إذا شاركت في هذه الدراسة ، فمن المتوقع أن تحضري ست ورش عمل عن بعد مدة كل منها ساعتين. ستقومين بتطبيق الاستراتيجيات التي نتناولها في ورش العمل كلما سمحت الفرصة خلال تفاعلك مع الأطفال في مختلف المواقف التعليمية، علما باننا سنركز في هذه الدورة على ٥ استراتيجيات.

واشجعك على كتابة ملاحظاتك والاحتفاظ بها طوال فترة البرنامج لاستخدامها خلال المقابلات وجلسات الحوار الفردية وجلسة نقاش جماعية في الأسبوع ١٤.

سيتم بذل كل جهد لحماية سرية جميع المشاركات. ولن يتم استخدام أسماء المعلمات او المدرسة في أي تقرير عن هذه الدراسة

التأكيد على أن المشاركة في الدراسة تطوعية

أدرك أنني إذا وافقت على المشاركة في هذه الدراسة ، فيمكنني الانسحاب من المشاركة في أي مرحلة. لن تكون هناك عقوبة على الانسحاب قبل الانتهاء من جميع مراحل الدراسة. لقد قرأت وفهمت المعلومات الواردة في هذا النموذج. أجابت الباحثة على أسئلتي ومخاوفي، ولدي نسخة إلكترونية من نموذج الموافقة هذا. لذلك ، أوافق على المشاركة في هذا المشروع البحثي

الرجاء إكمال ما يلي بوضع دائرة على "نعم" أو "لا" لكل سؤال:

لقد قرأت النبذة التعريفية (أو قرأته لي الباحثة). نعم / لا

أنا أفهم المعلومات المقدمة. نعم / لا

أفهم المعلومات المقدمة فيما يتعلق بحماية البيانات. نعم / لا

لقد أتيحت لي الفرصة لطرح الأسئلة ومناقشة هذه الدراسة. نعم / لا

لقد تلقيت إجابات مرضية على جميع أسئلتي. نعم / لا

توقيع المعلمة ....: ....

الاسم ....: ....

التاريخ..: ....

لقد تلقيت إجابات مرضية على جميع أسئلتي. نعم / لا

Appendix J: Examples of Data

Post-Initiative Interview Example
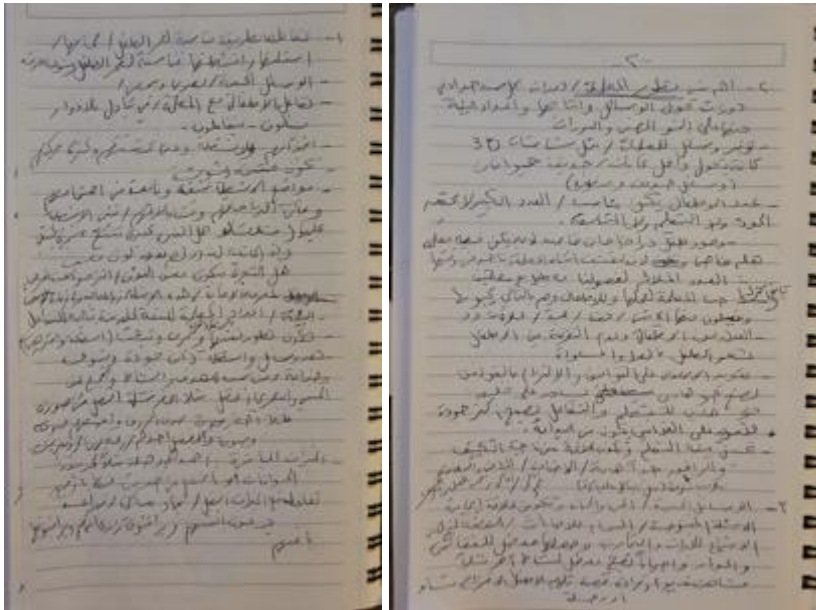
تبدو التفاعلات عالية الجودة بين المعلم والطفل :

عندما تتفاعل المعلمة مع الطفل بطريقة تناسب عمره، حماسها، اسئلتها، انشطتها جميعها مناسبة لعمر الطفل

ومستوى معرفته ومايود ان يعرفه.

تستخدم المعلمة ادوات وخامات متعددة خصوصا ذات النهايات المفتوحة الي تشجع الطفل على الابداع

والابتكار

تفاعل الاطفال مع المعلمة وحماسهم، هناك تبادل ادوار بين المعلمة والطفل يسالون ويتفاعلون

انجذاب الاطفال للانشطة وعدم تشتتهم وكثرة حركتهم

تكون مبتسمة وبشوشة وحنونه

مواضيع الانشطة شيقة ونابعهة من اهتمات الاطفال واقتراحاتهم وتساؤلاتهم

مثلا اذا البذرة كبيرة هل تكون الشجرة كبيرة، اذا كانت البذرة بلون معين هل تكون الشجرة بنفس اللون

حب المعلمة لعملها وللاطفال وهم بالتالي يحبونها ويتفاعلون معها. ثقة الاطفال بمعلمتهم ومحبتها لهم

وشعورهم بالعدل والمساواة

تعد المعلمة بيئة التعلم بشكل جيد

المعلمة دائما تسعى لتطوير نفسها بالقراءة وحضور الدورات

، تبحث وتجرب اشياء جديدة دائما(اساليب تفاعل- انشطة)

تعد وسائل تعليمية ذات جودة ومتنوعة وجذابة ومناسبة للاهداف التعليمة وتمع بين ان تكون حسية وبصرية

بنفس الوقت، مثلا اذا اردت ان اعلمهم عن الخروف   احضر لهم صورته وصوفه واسمعهم صوته والافضل ان اخذهم

مزرعة يرون الخروف في بيئته الطبيعية.

الخبرات المباشره افضل، اخذهم حديقة الحيوانات في رحلة افضل من الحديث فقط عن الحيوانات، ويزرعون

بانفسهم ويراقبون زرعاتهم ويسقونها

تعويد الاطفال على القوانين منذ بداية العام الدراسي والتزامهم بالقوانين لصنع جو هادىء يساعد على التعلم

والتفاعل بجودة اعلى

٢- حتى نطور التعليم في رياض الاطفال السعودية

تطوير المعلمات اهم شي. دورات سنوية كحد ادنى. دورات حول التفاعل واعداد الانشطة واعداد بيئة التعلم.

حث وتشجيع المعلمات على التطوير المهني المستمر.

توفير وسائل حديثة ومتطورة لتعليم الاطفال مثل شاشات ٣د التي تعطي جو مشابه للحقيقي كان الطفل يتجول

في الغابات او حديقة حيوانات.

عدد الاطفال يكون ملائم، نسبة الاطفال للمعلمة تكون ملائمة:لايمكن تحقيق جودة التفاعل بين المعلمة والطفل

اذا كان عدد الاطفال كبير في الفصل. لا يمكنني ان اتفاعل مع الاطفال ولا اتابع نموهم ولا تعلمهم اذا كان العدد كبير.

العدد الملائم بالنسبة لمساحة فصولنا في الروضة هو ٢٠ طفل مع معلمتين.

اذا كان في الفصل اطفال ذوي احتياجات خاصة فيجب ان تكون هناك معلمة متخصصة معهم لانهم ياخذون

وقت كبير من المعلمة عند التفاعل والمتابعة.

رفع جودة بيئة التعلم وتكون ملائمة من حيث تكيف الهواء (درجة حرارة الصف)/ الاضاءة والافضل ضوء الشمس، البيئة امنه للاطفال. المرافق جدا هامة، الملاعب متنوعة (ملعب رمل، ملعب كرة قدم، ساحة لعب للدراجات)، اماكن راحة للمعلمات وقت البريك.

٣- الاستراتيجيات التي استخدمها واظنها الاكثر فعالية هي

استخدام الوسائل الحسية، الحب والحنان وتكوين علاقة ايجابية مع الطفل، الاسئلة المفتوحة، الاستماع لاجابات الاطفال، العصف الذهني، الاستماع لخبرات وتجارب الاطفال وجعلها مدخل للنقاش والحوار واحيانا تصبح مدخل لنشاط اخر مثلا عند مشاهدة فديو او قراءة قصة تلهم الاطفال لاقتراح نشاط او رحلة اثارة ضول الاطفال بالاسئلة والمناقشة والتغذية الراجعة والتفكير المشترك المستدام.

استخدام خامات من البيئة، مشاركة الاطفال باحضار خامات من بيئتهم

استخدام مواد ذات نهايات مفتوحة والحديث عنها مثلا صورة طفل مع شجرة ويتحدث عن الصورة.

٤- تغيرت بعض ممارساتي مع الاطفال مثلا صرت اهتم اعرف معلومات عن الطفل، في احدى ورش العمل عرضتي فديو عن جودة التفاعل وقالت المعلمة بانها في بداية العام تسال الاطفال عن معلومات عنهم مثل اسم حيوانه الاليف او اخوه الصغير ثم ترجع تساله لاحقا فيحس انها تهتم فيه ويحس ان المعلمة قريبة منه، يطور لغته، يعطيه ثقة. اصبحت احاول ان اسال اسئلة مفتوحة اكثر واجعل النقاش اطول حتي يشارك جميع الاطفال بارائهم ويحس كل طفل منهم بانه رايه مهم

٥- محتوى الورش كان مفيد ومترابط

التغذية الراجعة التي كنتي تعطينا بعد الزيارة مفيدة واتمنى تعطينا اكثر

افضل ان تكون الورش وجها لوجه لمدة ساعة واحدة بشكل اسبوعي بداية الفصل الدراسي لمدة ٦ اسابيع مثلا

اعتقد انها دورة مفيدة للمعلمات

الفديوات المعروضة خلال الدورة كانت مفيدة وملهمة تعرفنا من خلالها على خبرات جديدة لدول اخرى

1. High-quality teacher-child interactions appear when: (indicators)

2. The teacher shows her enthusiasm to interact with the child. Interact in an appropriate way to the child's age; the teacher's questions, activities are all appropriate to the child's age, level of knowledge and what he wants to learn.

3. The teacher uses variety of educational means and materials, especially those with open ends, which encourage the child to be creative and innovative.

4. Children interact with the teacher interestingly and enthusiastically، there is an exchange of roles between the teacher and the child (asking, discussing, interacting…)

5. The children are attracted to the activities and not being bored, distracted or moving a lot in the class.

6. The teacher is smiling and affectionate.

7. The topics of the activities are interesting and based on the children's interests, suggestions, and questions.

For example, we discussed the seeds and trees. The children were wondering if the seed is big (like avocado seed) does the tree will be big too? If the seed is in a certain color, is the tree will be the same color? The children came up with so many ways to answer theses question for example planting some seeds, visiting a farm, searching online.

8. The teacher is motivated and interested in her work with children. Children's trust and love for their teacher and their feel of justice and equality.

9. The teacher prepares the learning environment very well to create the perfect atmosphere for interaction.

10. The teacher always strives to develop herself by reading and attending courses, she always looking for and trying new things (interaction methods - activities)

11. Educational means and materials are High-quality, varied, attractive and suitable for educational goals, at the same time visual and sensual. For example, if you want to teach children about the sheep you can bring them a

picture of the sheep, some sheep wool and play a clip of its voice, however, it is better if you take them to a farm where they see the sheep in its natural environment.

First-hand experiences are always better, taking the children to the zoo, for example, is better than just talking about the animals, planting some seeds themselves, watching and watering their plants is better than just showing some pictures.

12. Familiarize children with the classroom roles from the beginning of the school year; their commitment to the roles create a calm atmosphere for higher quality learning and interaction.

2- To develop education in Saudi kindergartens:

13. Teachers' development is the most important factor. Teachers must attend a minimum of one course a year. Courses on interaction, planning and implementing activities, and developing a learning environment. Promoting teachers' professional development.

14. Providing modern and advanced educational means such as three-dimensional screens that give an atmosphere similar to reality as if the child was wandering in the forest or in a zoo, for example.

15. Appropriate number of children in each class, if the ratio of children to the teacher is appropriate; teacher-child interaction will be high. I cannot interact with children, follow their growth, or teach them if the number is large. The appropriate number of classrooms in the kindergarten is 20 children with two teachers. However, If the class has children with special needs, there should be a special education teacher (third teacher).

16. Raising the quality of the learning environment (physical environment), proper classroom temperature (air conditioning) / proper lights (sunlight is best / large windows), and a safe environment that is suitable for children

(size-needs). Kindergarten facilities are very important too, outdoor area include (sand area, football field, cycling area, slides and swings), and a comfortable rest room for teachers.

3- The strategies that I use and I think that they are the most effective are:

Using sensory means.

Love and affection.; forming a positive relationship with the child.

Using open-ended questions.

Brainstorming, listening to children's answers, ideas, suggestions, and experiences and making them an entry point for discussion and sometimes becoming an entrance to other activities, for example, watching a video or reading a story inspires children to suggest an activity or a trip.

Stimulating children's curiosity with questions, discussion, feedback and sustained??-shard thinking strategies.

Using materials from the environment, asking children to bringing materials from their environment.

Use open-ended materials and discuss about them, for example, a picture of a child with a tree and talking about the picture.

4- Some of my practices with children have changed, for example, I became interested in knowing information about the child. In one of the workshops, you showed a video about the quality of interaction. The teacher said that at the beginning of the year she asks each child some questions about their families or their interests, such as the name of his pet or siblings, child feels that the teacher cares about him, close to him. That also helps in developing the child's language, encourages him to express himself, and gives him confidence.

I am trying to ask more open-ended questions and make the discussions longer so that all the children participate and share their opinions and each child feels that his opinion is important.

5- The content of the workshops was useful and coherent

The feedback you were giving us after the visit is useful and I hope you give us more.

I prefer that the workshops be face to face for one hour per week at the beginning of the semester for a period of 6 weeks, for example

I think it is a useful course for teachers.

The videos presented during the course were useful and inspiring, through which we learned new experiences from other countries. I still, remember the Chinese videos (AnjiPlay) for example

Pre-Initiative Focus Group
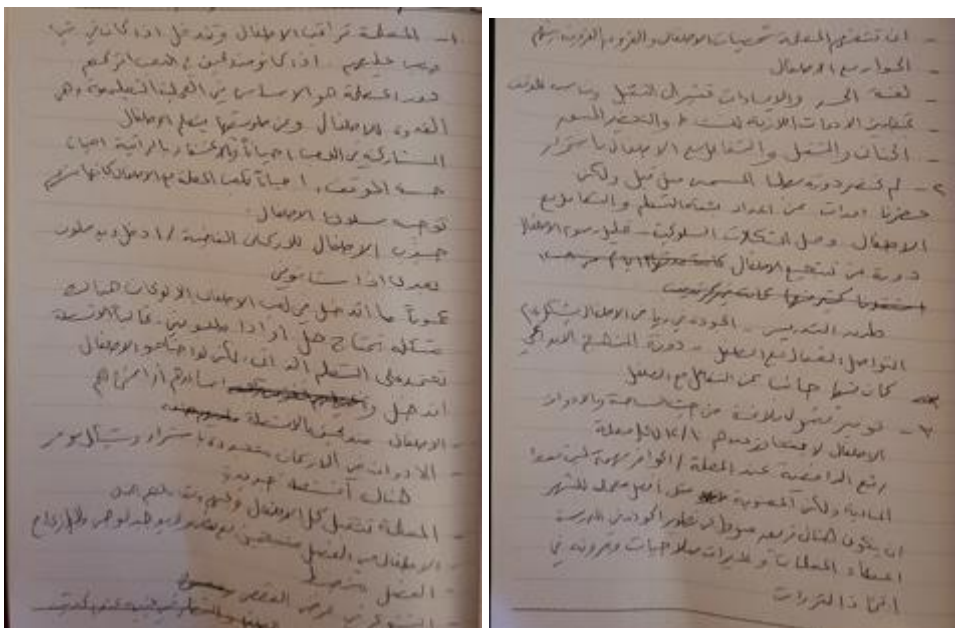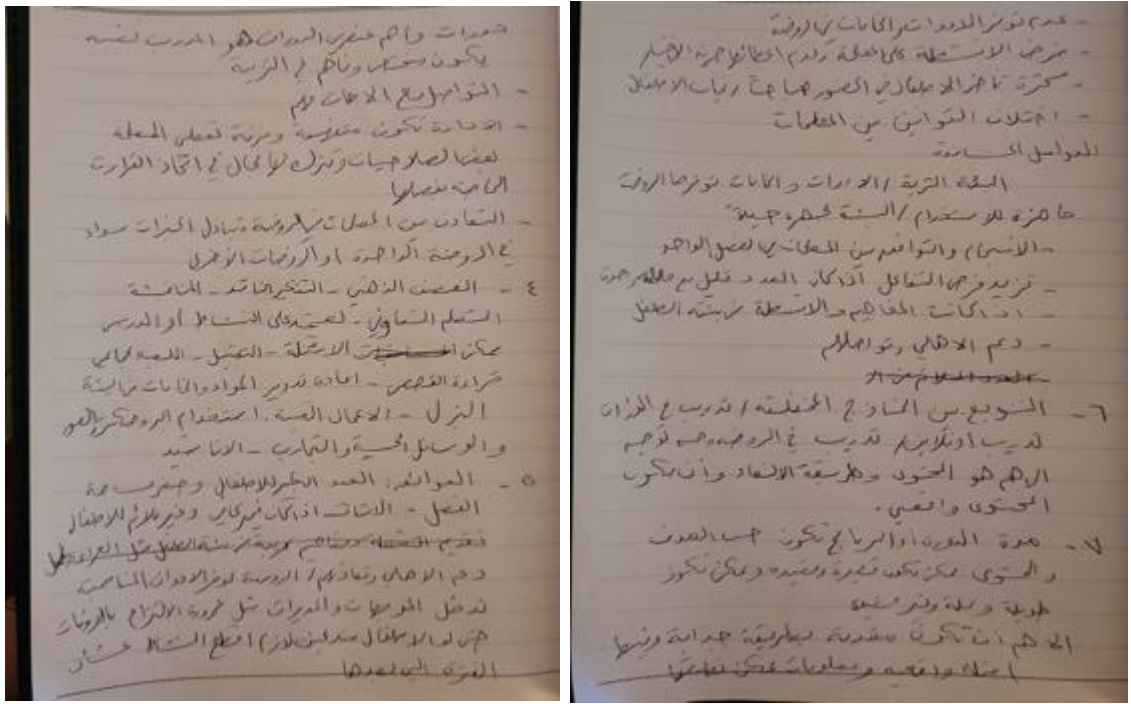
١ـ تلعب المعلمه الدور الاساسي في تعلم الطفل. وهي قدوه للاطفال وعن طريقها يتعلم الاطفال. دور المعلمه الاساسي اعدا الانشطة و مراقبة الاطفال وهم ينفذونها تتدخل اذا كان في شيء صعب عليهم او يحتاجون مساعدة اما اذا كانو مستمتعين ومنخرطين في اللعب تتركهم دون تدخل.

احيانا تشاركهم اللعب واحيانا تكتفي بالمراقبة حسب الموقف التعليمي.

احيانا تلعب المعلمة مع الاطفال كانها منهم. توجيه السلوك الاطفال باستخدام الاساليب التربوية. احيانا ادخل مركز تعليمي لا يعتبر جذاب للطفل ومن ثم يدخلون بعدي واتفاعل معهم بالركن. عموما لا اتدخل في لعب الاطفال الا لو كان هناك مشكله تحتاج حل واذا طلبوا مني ان اساعدهم او العب معهم.

اغلب الانشطه التي نقدمها تعتمد على مبدا التعلم الذاتي بحيث يتعلم الطفل بنفسه او مع اصحابه بدون تدخل من المعلمة، لكن بعض الاطفال يحتاجون ان تتدخل المعلمة تساعدهم او تشرح لهم.

ايضا من سمات التفاعل عالية الجودة ان الاطفال مندمجين باللعب و الادوات في الاركان التعليمية متجدده باستمرار وبشكل يومي هناك انشطه جديده.

المعلمه تتقبل كل الاطفال وتحبهم وتعاملهم بحنان

الاطفال في الفصل منسجمين مع بعض ولا يوجد فوضى ولا ازعاج "الفصل منضبط"

القصص مهمه ولكن يجب التنويع في طريقة عرضها (بروجكتر، مطبوعة. مسرح عرائس، مقطع فديو، دمى).

النزول لمستوى الطفل والنظر في عينيه عند الحديث معه

ان تفهم المعلمه شخصيات الاطفال والفروق الفرديه بينهم

الحوار مع الاطفال

لغه الجسد والايماءات تشير الى تقبل الطفل ومناسبه للموقف التعليمي

تجهيز الادوات اللازمه للنشاط والتحضير المسبق

الحنان والتقبل والتفاعل مع الاطفال بشكل مستمر.

٢- لم نحضر دوره بهذا المسمى ولكن حضرنا دورات عن اعداد بيئه التعلم، والتعامل مع الاطفال وحل المشكلات السلوكيه، تحليل رسوم الاطفال، دوره عن تشجيع الاطفال، طرق التدريس، الجودة في رياض الاطفال بشكل عام، التواصل الفعال مع الطفل، المنهج الابداعي فيها جانب عن التفاعل مع الاطفال.

٣- توفير فصول ملائمه من حيث المساحه والادوات. الاطفال لا يتجاوز نسبة عدد الاطفال ١٠ الى 12 طفل معلمة.

رفع الدافعيه عند المعلمات، الحوافز مهمه ليس بالضرورة مادية بل معنوية مثل افضل معلمه للشهر.

ان يكون هناك فريق مسؤول عن تطوير الجوده في المدرسه.

اعطاء المعلمات والمديره الصلاحيات والمرونه في اتخاذ القرارات.

ورش العمل والدورات، واهم عنصر في الورشه ان يكون المدرب مختص في التربيه.

التواصل مع الامهات والمعرفة اكثر عن الطفل.

الاداره تكون متفهمة ومرنه تعطي المعلمه بعض الصلاحيات وتترك لها مجال في اتخاذ القرارات الخاصه بفصلها

التعاون بين المعلمات في الروضه وتبادل الخبرات سواء في نفس الروضة او مع الروضات الاخرى.

4 يعتمد على النشاط او الدرس العصف الذهني، التفكير الناقد، المناقشه، التعلم التعاوني، الاسئله، التمثيل، اللعب الجماعي، قراءه القصص، اعاده تدوير المواد بالخامات من البيئه، الاحاجي، الاعمال الفنيه، استخدام البروجكتر والصور والوسائل الحسية، والتجارب والاناشيد.

٥- عوائق جودة التفاعل مع الاطفال: العدد الكبير للاطفال، صغر مساحه الفصل، الاثاث الغير كافي والغير ملائم للاطفال، عدم دعم الاهالي وتعاونهم، عدم توفير الروضة للوسائل التعليمية والخامات المناسبه.

تدخل الموجهات والمديره في قرارات المعلمه مثلا لابد ان التزم بالوقت المحدد لكل فترة حتى لو الاطفال مستمتعين ومهتمين يجب ان اقاطعم اذا انتهى الوقت وننتقل للفترة الاخرى من البرنامج اليومي.

فرض الانشطه على المعلمه وعدم اعطائها حريه الاختيار والتخطيط للانشطة كثره تاخر الاطفال في

الحضور صباحا او غيابهم عن الروضه

اختلاف القوانين بين المعلمات في نفس الفصل

العوامل المساعده في جودة التفاعل: البيئه التعليمية المناسبة للطفل من حيث المساحة و المجهزه تجهيزا

جيدا، تتوفر فيها الوسائل التعليمية والخامات وتكون جاهزه للاستخدام.

الانسجام والتوافق بين المعلمات في الفصل الواحد من حيث القوانين ووجهات النظر

تزداد فرصه التفاعل عالي الجودة اذا كان العدد قليل من معلمه واحده و اذا كانت المفاهيم والانشطه مستمده

من بيئه الطفل، ايضا اذا كان الاهل يدعمون ويتواصلون مع المعلمة .

٦- التنويع بين النماذج المختلفه للتدريب امر جيد: التدريب في مقر وزارة التعليم، تدريب اونلاين، تدريب في

الروضه وجه لوجه. الاهم هو المحتوى و طريقه الالقاء وان يكون المحتوى واقعي

٧- مده الدوره او البرنامج تكون حسب الهدف والمحتوى ممكن تكون قصيره ومفيده، ممكن تكون طويله مملة

وغير مفيده الاهم ان تكون مقدمة بطريقة جذابة و فيها امثله واقعيه ومعلومات ممكن تطبيقها عمليا مع الاطفال في

الصف.

Observation Notes Example

(Translated)

Observation 6 / Week 8 / Birds Class / Fatmah and Hanan

The first corner I went to was the discovery corner. There was a scale, a child trying to weigh things. Later, another child joined him. Teacher Hanan was close to the child and asked him some questions, such as which one was heavier, why is it heavier, and why one of the scale sides went down to go down to the bottom of the scale. How do we make the scale balanced? The child was enjoying the activity. The teacher asked him a question and went, she said, "If you could balance the scale let me know." The child was trying and the other child helped him for a while until he balanced the scale. He was happy with the result and did not call the teacher. Another child was playing with sand and trying to decorate a cake of sand with leaves. The teacher noticed that it was a creative work and praised him and asked him what he had done and how he did it. the child said that he took the leaves and decorated the cake.

There was a café corner (new corner). The teacher sat with the children and took the role of the customer and asked for coffee and a cake and had coffee with the children...

she asked them some questions to create a conversation. Three children were doing a puzzle and were enjoying their work. the teacher asked them if they could do it again and they said yes, they did it much faster the second time...

Teacher Fatmah made dough with some children. The dough was too sticky and she had a discussion with the children about how to make it less sticky so it would not adhere to their hands during play. Some of them added salt and some flour. She let them keep trying until the dough was good enough to play with. The children looked interested in the activity, and she mentioned to me later that she purposely wanted the children to try for themselves to make the dough usable........

Appendix K: Implementation Plan

March 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	1	2	3	4	5
6	7	8	9	10	11	12
13 Week 1 Pre-interviews	14 Pre-interviews	15 Pre-focus group	16 Workshop 1 Introduction to the initiative	17 Workshop 2 Learning environment. Workshop 3 General introduction to pedagogical (interaction) strategies in high-quality ECEC.	18	19
20 Week 2 Birds (1)	21 Bees (1)	22 Sunshine (1) Rainbow (1)	23 Colors (1)	24 Flowers (1) Maryam (1)	25	26
27 Week 3 Birds (2)	28 Bees (2)	29 Sunshine (2)	30 Rainbow (2)	31 Workshop 4 - Questioning, feedback, discussing	1	2

Notes:

April 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3 Week 4 Colors (2)	4 Flowers (2)	5 Maryam (2)	6 Birds (3)	7 Bees (3)	8	9
10 Week 5 Sunshine (3)	11 Rainbow (3)	12 Colors (3)	13 Workshop 5 Problem-solving strategy	14 Maryam (3) Flowers (3)	15	16
17 Week 6 Colors (4)	18 Birds (4) Flowers (4)	19 Bees (4)	20 Sunshine (4) Maryam (4)	21 Rainbow (4)	22	23
24 x	25 x	26 x	27 x	28 x	29	30

Notes:

X - Holiday

May 2022   2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 x	2 x	3 x	4 x	5 x	6	7
8 Week7 Bees (5)	9 colors (5)	10 Maryam (5) Flowers (5)	11 Birds (5) Sunshine (5)	12 Rainbow (5)	13	14
15 Week 8 Sunshine (6)	16 Colors (6)	17 Rainbow (6)	18 Workshop 6 Sustained-shared thinking strategy	19 Birds (6)	20	21
22 Week 9 Bees (6)	23 Flowers (6)	24 Maryam (6)	25 l lo long weekend lll X Long weekend	26 X Long weekend	27	28
29 Week 10 Birds (7)	30 Bees (7)	31 Sunshine (7)	1	2	3	4

Notes:

X - Holiday

June 2022   2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29 Week 10	30	31	1 Maryam (7) Rainbow (7)	2 Colors (7) Flowers (7)	3	4
5 Week 11 Bees (8)	6 Sunshine (8)	7 Birds (8)	8 Rainbow (8) Maryam (8)	9 Colors (8) Flowers (8)	10	11
12 Week 12 Bees (9)	13 Sunshine (9)	14 Birds (9)	15 X Long-weekend	16 X Long-weekend	17	18
19 Week 13 Rainbow (9)	20 Post-interviews Maryam (9)	21 Post-interviews Colors (9)	22 Post-interviews Flowers (9)	23 Post-interviews	24	25
26 Week 14 Post-interviews Summer Holiday starts (children)	27	28	29 Post-focus group	30	1	2

Notes:

X - Holiday

Appendix L: Pre-Initiative Interviews

As you know, my name is Norah and I am in the middle of a PhD study investigating Saudi kindergarten teachers' perceptions of teacher-child interaction quality before and after a continuing professional development initiative. The aim of the study is to develop teacher-child interaction in Saudi kindergartens through a job-embedded CPD. I would like to take this opportunity to thank you for participating in this research. Today, I would like to ask you a few questions based on your experience. During this interview, you can ask any questions and add to the conversation. As you are aware from the consent form, with the exception of my supervisor, no one will have access to this interview, and when reporting findings, a pseudonym will be used to protect your identity and ensure confidentiality at all times.

1. What are your own beliefs about the role of the adult in supporting young children's learning and development?
   Prompts – to be a co-player with children and interact with them, let children play and monitor for safety, to interact and extend children's language and thinking, …

2. What is the extent to which you feel you should intervene in children's activities in order to engage them in dialogue?

3. From your perspective, what do high-quality teacher-child interactions look like?

   > **Prompts** (if needed):
   >
   > What are the key factors of teacher-child interaction quality?

4. Do you have opportunities to plan for and assess your interactions for the learning and development of the children?

5. Had you attended any CPD that focused on teacher-child interaction quality?

6. What role does the environment have in teacher – child interactions?
7. From your perspective, what are the most important characteristics and components of a high-quality learning environment (indoor & outdoor)?
8. In what contexts, parts of the daily routine and locations, do you think are interactions most like to happen?

9. I am interested to know what opportunities and/or barriers may arise in your view to promote children's thinking and learning and development through interactions?

10. In your opinion, how can teacher-child interaction quality be developed in Saudi kindergartens?

11. What strategies do you use to interact with children in your class?

12-What do you think are the most effective interaction strategies?

13-How do you decide which strategy is appropriate to a specific learning event?

14 - At the end of the interview, I would like to thank you for your time and am happy to answer any

questions you have and hear any addition or comment you would like us to wrap up our interview with

today.

١ـ ما هي معتقداتك بخصوص دور المعلمة في دعم تعلم الأطفال ونموهم؟

) أمثلة للحث على الإجابة: أن تكون شريكة في اللعب مع الأطفال وتتفاعل مهم ، تجعل الأطفال يلعبون

بحرية وهي تراقبهم من اجل سلامتهم، تتفاعل مع الأطفال وتدعم (او توسع) تفكيرهم ولغتهم (

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٢ـ إلى أي مدى تشعرين بأنه يجب عليك التدخل في أنشطة الأطفال من أجل حثهم على الحديث والحوار؟

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٣ـ من وجهة نظرك، كيف يبدو التفاعل ذو الجودة العالية بين المعلمة والطفل ؟

)أمثلة للحث على الإجابة: ماهي العناصر الأساسية للتفاعل ذو الجودة العالية(

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٤- هل لديك فرص لتخطيط وتقييم تفاعلاتك الداعمة لتعلم الأطفال ونموهم ؟

(للتوضيح: كيف تخططين وتقيمين تفاعلاتك مع الأطفال، ماهي الأدوات التي تستخدمينها هل انت من يقوم

بالتخطيط والتقييم؟(

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٥- هل سبق وان حضرتي دورة تدريبية تركز على جودة التفاعل بين المعلمة والطفل ؟

(للتوضيح إن لزم: مفهوم جودة تفاعل المعلمة والطفل يعتبر مفهوم جديد نسبيا في التعليم في المملكة العربية

السعودية وعدد من العناصر الأساسية المكونة لهذا المفهوم يشار إليها بمسميات أخرى مثل : طرق التدريس، التعلم عن

طريق اللعب، كفايات المعلمات. هل سبق وأن حضرتي خلال مسيرتك المهنية كمعلمة أي دورة تدريبية كانت فعالة ولها

اثر ملموس في تغيير آدائك كمعلمة روضة ؟

إذا سبق وان حضرتي درة من هذا القبيل، كم كانت مدة هذه الدورة، ما رأيك فيها؟ على ماذا اشتملت، ماهي

أهم العناصر؟ كيف طلب منك تطبيق ما تعلمتيه خلال الدورة ؟

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٦ـ برأيك، ما هو دور البيئة (بيئة التعلم الداخلية والخارجية) في جودة التفاعل بين المعلمة والطفل ؟

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٧ـ من وجهة نظرك، ماهي أهم مواصفات ومكونات بيئة التعلم ذات الجودة العالية (الداخلية والخارجية؟(

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٨ـ باعتقادك متى تحدث التفاعلات اكثر بينك وبين الأطفال؟ في أي السياقات أو المواقع أو الأوقات من الروتين

اليومي؟

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٩- من وجهة نظرك ماهي الفرص (أو العوائق) التي قد تظهر لتعزيز تفكير الأطفال، تعلمهم، ونموهم خلال

تفاعلك مع الأطفال؟

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١٠- من وجهة نظرك كيف يمكننا رفع مستوى جودة التفاعل بين المعلمة والطفل في الروضات السعودية

(للتوضيح إن لزم: هل تعتقدين أن الدورات في مقر الروضة فعالة ؟ هل تقترحين أي طرق للتطوير أو تقترحين

تغيير بعض السياسات التعليمية؟)

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١١- ماهي الاستراتيجيات التي تستخدمينها للتفاعل مع الأطفال في صفك؟

(للتوضيح (إن لزم) : ما هي طرق التفاعل (أو طرق التدريس) التي تستخدمينها لتعزيز تعلم الأطفال ونموهم

في صفك؟)

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١٢ـ برأيك ماهي استراتيجيات التفاعل الأكثر فعالية مع الأطفال؟

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١٣ـ كيف تقررين أي استراتيجية هي الأنسب لموقف تعليمي معين؟

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١٤ـ في نهاية المقابلة أود ان أشكرك عل وقتك ويسعدني أن اجيب أي أسئلة لديك وأن استمع لأي إضافة أو

تعليق تحبين ان نختم به مقابلتنا اليوم

....

....

Appendix M: Post-Initiative Interviews

Interview Questions for Teachers

(Second Interview) (Week 13)

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction

Quality before and after a Professional Development Initiative

1. From your perspective, having completed the PD, what do high-quality teacher-

   child interactions look like?

   Prompts (if needed):
   What are the key factors of teacher-child interaction quality?

2. In your opinion, how can teacher-child interaction quality be developed in Saudi

   kindergartens?

   Prompts (if needed):
   Do you think job-embedded CPD is an effective way?
   Do you recommend any other ways?

3. What interaction strategies do you use to interact with children in your class?

   Prompts (if needed):
   What interaction (or pedagogical) strategies do you use to promote children's learning
   and development in your class?
   What do you think are the most effective interaction strategies?
   How do you decide which strategy is appropriate to a specific learning event?

4. Has your practice changed as a result of this initiative? If so, in what ways?

   Prompts (if needed):
   What interaction (or pedagogical) strategies did you adapt to promote children's learning
   and development in your class?
   What do you think are the most effective interaction strategies? Perhaps as prompt, list
   them?

   How do you evaluate the PD? And how it can be developed?

What did you like about the PD?

What could I improve on?

Any other comments about the PD, length, timing, content?

Prompts (if needed)

What do you think about the CPD duration? Was it long enough?

What do you think about the CPD contents? What would you add or delete?

What is the best model of CPD in your opinion and why? (Online, in the Ministry, in-school, hybrid, all face-to-face

Was there any key learning or idea for you in this CPD? (Take-away message)

المقابلة الفردية البعدية

الفصل الدراسي الثالث /الأسبوع ١٣

١ـ من وجهة نظرك وكونك اكملتي دورة جودة التفاعل بين المعلمة والطفل، كيف تبدو التفاعلات عالية الجودة بين المعلمة والطفل؟

تحفيز (ان لزم): ماهي العوامل/ السمات الأساسية لجودة التفاعل بين المعلمة والطفل؟

٢ـ برأيك كيف يمكن تطوير جودة التفاعل بين المعلمة والطفل في رياض الأطفال السعودية؟

تحفيز (ان لزم) هل تعتقدين ان التطوير المهني المتضمن في الوظيفة (مقر الروضة) طريقة فعالة؟

هل تقترحين أي طريقة أخرى؟

٣ـ ما هي استراتيجيات التفاعل التي تستخدمينها للتفاعل مع الأطفال في صفك؟

تحفيز (ان لزم) ما هي استراتيجيات التفاعل التي تستخدمها لتعزيز تعلم الأطفال ونموهم في صفك؟

برأيك ما هي استراتيجيات التفاعل الأكثر فعالية؟

كيف تقرر الاستراتيجية المناسبة لحدث تعليمي معين؟

٤ـ هل تغيرت ممارستك نتيجة لهذه المبادرة؟ إذا كان الأمر كذلك، كيف تغيرت؟

تحفيز (ان لزم) ماهي الاستراتيجيات التي تبنيتيها لتعزيز نمو الأطفال وتعلمهم في فصلك؟

برايك ماهي استراتيجيات التفاعل الأكثر فاعلية؟ هل يمكنك ان تعطيني قائمة بهذه الاستراتيجيات؟

٥ـ كيف تقيمين الدورة التدريبية؟ وكيف يمكن تطويرها؟

ما الذي أعجبك في هذه الدورة؟

ما الذي يمكنني تحسينه؟

هل لديك أي تعليقات اخرى بخصوص الدورة ؟ طول الورش التدريبية، التوقيت، المحتوى؟

تحفيز (ان لزم) ما رايك بطول الدورة التدريبية؟ هل كانت مدتها كافية؟

ما ريك بمحتوى الدورة؟ ما الذي تودين اضافته او حذفه؟

ما هو افضل نموذج للتطوير المهني للمعلمات من وجهة نظرك؟ (عبر الانترنت، وجها لوجه، مختلط "عبر الانترنت + وجها لوجه"، في مقر الوزارة، في الروضة(

هل هناك أي فكرة او معلومة تعتبرينها الأبرز كانت بالنسبة لك خلال الدورة ؟

Appendix N: Pre-Initiative Focus Group Questions

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality

before and after a Professional Development Initiative

(Week 1)

1. From your perspective, what do high-quality teacher-child interactions look like?

2. Have you attended any PD that focused on teacher-child interaction quality?

3. In your opinion, how can teacher-child interaction quality be developed in Saudi kindergartens?

4. What strategies do you use to interact with children in your class?

5. From your perspective what enables and constrains quality interactions?

6. From your perspective, what is the most effective PD model and why?

7. From your perspective, how long the PD should be? What are the main characteristics of an effective PD model?

تصورات معلمات الروضة السعوديات حول جودة التفاعل بين المعلمة والطفل قبل وبعد مبادرة للتطوير

المهني المستمر

مجموعة النقاش (Focus Group)

(الأسبوع الاول من الدراسة الاساسية)

1. من وجهة نظرك كيف يبدو تفاعل المعلمة مع الطفل في رياض الأطفال التي تتسم بمستوى عالي من الجودة؟

2. كيف يجب ان تكون البيئة التعليمية في رياض الأطفال التي تتسم بمستوى عالي من الجودة؟

3. من وجهة نظرك ما الذي يساعد في ان تكون تفاعلات المعلمات مع الأطفال ذات جودة عالية؟ ما الذي يعيق ان تكون التفاعلات ذات جودة عالية؟

4. ماهي الاستراتيجيات التي تستخدمينها للتفاعل مع الأطفال في فصلك؟

5. من وجهة نظرك، كيف يمكننا رفع مستوى جودة التفاعل بين المعلمة والطفل في الروضات الحكومية؟

6. من وجهة نظرك، كيف يجب ان يكون التطوير المهني للمعلمات؟ ما هو أفضل قالب او نموذج ولماذا؟

(دورات عن بعد، دورات حضورية، دورات في مقر الروضة, تدريب فردي، ان يكون هناك فريق خاص بالتوجيه والتدريب داخل الروضة.....الخ)

7. برايك ماهي المدة المناسبة لبرامج التطوير المهني؟ ماهي اهم خصائص او مميزات برامج التطوير المهني الفعال؟

Appendix O: Post-Initiative Focus Group Questions

Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality

before and after a Professional Development Initiative

(Week 13)

1. From your perspective, what do high-quality teacher-child interactions look like?

   Prompts (if needed):

   What are the key factors of teacher-child interaction quality?

2. From your perspective what enables and constrains quality interactions?

3. In your opinion, how can teacher-child interaction quality be developed in Saudi kindergartens?

   Prompts (if needed):

   Do you think job-embedded PD is an effective way?

   Do you recommend any other ways?

4. Based on the individual interviews, almost all of you agree that the large number of children in the class affect the quality of teacher-child interaction, what solution do you have for this problem (based on what we have discussed during the workshops)?

   Prompts (if needed)

   How can you organize the environment in a way that helps you to interact with children?
   How can you plan activities that are interesting to the children?
   Would you give the children the chance to plan the learning activates with you? If yes, how can you do that?

5. In your opinion, which strategies are most effective with big classes?

> **Prompts** (if needed)
>
> What do you think about the strategies that we have discussed (questioning, feedback, discussion, problem-solving, sustained-sheared thinking) are they appropriate to be used in big classes?

6. Has your understanding of the self-learning principle changed based on what you have learned about TCIQ during this PD? If yes how?

> **Prompts** (if needed)
>
> In your opinion, what is your role during the learning centers time / outside play time? To be a co-player with children and interact with them>Let children play and monitor for safety? To interact and extend children's language and

7. Was there any key learning or idea for you in this PD? (Take-away message)

> **Prompts** (if needed)
>
> Has your classroom practice changed in any way based on what you learned in the PD?

Is there anything else about teacher child interaction or the PD initiative that you would like to add?

أسئلة مجموعة التركيز

تصورات معلمات رياض الأطفال حول جودة تفاعل المعلمة مع الطفل قبل وبعد مبادرة للتطوير المهني المستمر

(الأسبوع ١٣)

1- من وجهة نظرك، كيف يبدو التفاعل (تفاعل المعلمة والطفل) الذي يتسم بمستوى عالي من الجودة؟

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للتوضيح)ان لزم(

ما هي الصفات او العوامل الرئيسية لجودة التفاعل بين المعلمة والطفل؟

</div>

2- من وجهة نظرك، ماهي العوامل التي تساعد في تحقيق جودة التفاعل بين المعلمة والطفل؟ وماهي العوامل التي تعيق تحقيق جودة التفاعل بين المعلمة والطفل؟

3- من وجهة نظرك، كيف يمكننا رفع مستوى جودة التفاعل بين المعلمة والطفل في رياض الأطفال السعودية ؟

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للتوضيح)ان لزم(

هل تعتقدين ان التطوير المهني داخل الروضة ممكن ان يكون فعال؟

هل تقترحين أى طرق أخرى للتطوير؟

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4- بناءً على اجوبتكم في المقابلات الفردية ، يوافق جميعكم تقريبًا على أن العدد الكبير من الأطفال في الفصل يؤثر على جودة التفاعل بين المعلمة والطفل ، ما هو الحل من وجهة نظرك لهذه المشكلة (بناءً على ما

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للتوضيح)ان لزم(

كيف يمكنك تنظيم البيئة بطريقة تساعدك على التفاعل مع الأطفال؟

كيف يمكنك التخطيط للأنشطة التي تهم الأطفال؟

، هل من الممكن ان تعطي الأطفال الفرصة لتخطيط أنشطة التعلم معك؟ إذا كانت الإجابة بنعم

</div>

ناقشناه خلال ورش العمل) ؟

5- برأيك ماهي الاستراتيجيات الأكثر فاعلية مع الاعداد الكبيرة من الأطفال؟

6- هل تغير فهمك لمبدأ التعلم الذاتي بناءً على ما تعلمته عن جودة تفاعل المعلمة والطفل أثناء هذا الدورة؟ إذا

كانت الإجابة بنعم ، فكيف تغير فهمك؟

7- هل هناك أي فكرة او معلومة تعلمتيها من خلال هذه الدورة ولازالت عالقة بذهنك او الهمتك لتغيير تفاعلك

من أي ناحية مع الأطفال؟

8- هل هناك أي شيء اخر تودين اضافته بخصوص جودة تفاعل المعلمة مع الطفل او بخصوص هذه الدورة

بشكل عام؟

Appendix P: ABC LD and Resources

ABC LD (Arena Blended Connected Learning Design)

This storyboard will help you to visually map out the intended learning experience of your module in a simple Google document format. You can choose to storyboard week by week or in blocks of weeks. If you prefer (e.g. Week 1, Weeks 2-4, Week 5, Week 6-12).

1. Select the relevant learning type colour coded tab eg. Acquisition. 🟠 Acquisition from the block underneath, and copy and paste into the relevant space on the storyboard grid.
2. Referring to the back of learning type cards (in the **Learning Types reference table** below), note the learning activities underneath the learning type header.

Study title: **Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality before and after a Continuing Professional Development Initiative** (main study workshops plan)

Participants: 9 Kindergarten teachers

Date: 10/03-16/06-2022

Workshop/ Topic	Content	Learning objectives	Learning design	Learning experiences from the participant's perspective	Reflections	Links	Notes
Workshop 1 1 Introduction to the initiative 10-03-2022	• Introduction to the initiative: initiative aims, stages, participants role during the initiative (including how to take reflection notes). • Goals of the Ministry of Education and education's role in Saudi Vision 2030. • ECEC quality, especially TCIQ (importance, meaning, indicators, and measurements)	By the end of the workshop, the teachers should achieve the following objectives: • Know the initiative goals and stages. • Recognize the goals of the Ministry of Education and education's role in Saudi Vision 2030. • Know their roles as participants in the initiative. • Know how to write reflection notes during the workshops and in class. • Write their reflection notes during the workshop. • Know the importance, meaning, indicators, and measurements of ECEC quality, especially TCIQ. • Recognize high-quality TCIQ practices.	Acquisition Discussion Practice Production	Before the workshop: • Reading short article (one page) • Watching short videos • Reading short handout (one page) A short article, handout, and videos have been sent via WhatsApp group to the participants prior to the workshop. Participants have been asked to prepare some questions and comments to be discussed during the workshop. During the workshop: - Listening to the presentation (PowerPoint) - Watching a video as an example of high-quality TCI (Teacher-Child Interaction) - Discuss as a group the characteristics of high-quality ECEC (focusing on TCI) - Discuss the article's main points/participants reflection. - Practice taking reflection notes. Reviewing the learning objectives in the end of the workshop.	Reflection notes templates during workshop, in class, and sampled (Appendix A) Workshop 1 summary (Table 1) Icebreaking activities: 1- what is your dream job when you were a child? 2- Let's find the common things between us as a group (list of 20 things) Expectations clarification): What do you expect from this initiative? Feedback question: - What keeps you interested and engaged during workshops like this? - How can I support your learning?	Interactions matter: What research says and what you can do! (article) (short summary in Arabic) Supporting children's active learning (video) Inspiring words by Crown Prince (video) Human Capability Development Program (video) Saudi Vision 2030 and Education (video)	The first workshop was an introductory meeting. During the meeting I found that the teachers have the time and the desire to learn more about the initiative so I presented the first workshop to all the kindergarten's teachers (19 teachers) 9 of them decided to participate in the study. Later I sent to those 9 the article, videos, and handout. We had a short discussion about the videos and the article on the WhatsApp group "Human Capability Development..." video was presented during the workshop

Workshop 2	By the end of the workshop, the teachers should achieve the following objectives:		Before the workshop:	Workshop 2 summary (Table 2)
- Learning environment 16-03-2022	Learning environment (indoor & outdoor) - The power of the environment - Organisation - Resources for play and learning - Environment and interactions • Know the important role of learning environment in ECEC programme quality especially TCIQ. • Know the features of a high-quality learning environment (include how to choose materials that are appropriate for children's learning and development) • Know how to organise the learning environment to support children's learning and development (including playing areas) • know the importance of outdoor learning environment and how to design it appropriately for the development of children.	**Acquisition** **Discussion** **Practice** **Production**	- Reading short article - Watching short videos - Reading short handout During the workshop: □ Review workshop 1 □ Reminding the participants to write reflection notes □ Listening to the presentation (PowerPoint) □ Watching video examples of high-quality learning environment. □ Discuss as a group the characteristics of high-quality learning environment. □ Reviewing the learning objectives in the end of the workshop. After the workshop (teachers' tasks) - Task 1 Sketch the layout of your classroom areas, take some photos of these areas, and write a plan for how you can develop the learning environment based on what we discussed today. Prepare to discuss your plan with me (if you like) in an individual short meeting next week. Suggestion: for this task, you can ask children about their ideas and suggestions about how to improve their learning environment, what do they like/ don't like about their class/ playground?	Icebreaking questions (discussion activity): □ What did you enjoy playing with as a child? □ From your observations of children what do they like playing with? □ Think of your favourite place to shop what is it you like about it? (The answers will likely be the things you want are grouped together, there is a place for different materials, they are arranged attractively, there is order, light, space for movement, Activity (before presenting the features of high-quality learning environment) How Do Environments Affect You? There are certain places you like to go back? maybe a favorite restaurant, a local park, a sporting arena or a good friend's home. What makes you want to go back? (The answers will likely be: this place makes me feel welcome or secure. the people in this place, the colors of the place, sunlight, the smells and sounds, furniture and accessories or temperature). • Feedback questions via Vevox: □ Please rate today's work shop? (1-5 stars scale) □ Do you have any suggestion to improve the workshop? [Living spaces-Indoor learning environments](#) (summary in Arabic) [Environments & materials for supporting physical play](#) (video) [Building Supportive Environments: Setting Rules and Expectations](#) (video) [Anji Play - Barrels, Ladders, Sandbags](#) (video) [Children at Play in Anji County, China Kindergartens](#) (video) [True play development|Anji China](#) (video)

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Workshop 3	General introduction to pedagogical strategies in high-quality ECEC.	By the end of the workshop, the teachers should achieve the following objectives:		Before the workshop:

- General introduction to pedagogical (interaction) strategies in high-quality ECEC.
 	
17-03-2022
	- Social and emotional interaction (characteristics & Importance)
	- Social and emotional – relationship building
	- pedagogical strategies definition and examples.
	- Choosing the appropriate pedagogical strategy in different situations
		• Know the characteristics and importance of socially and emotionally supportive teacher-child interactions.
		• Recognize socially and emotionally supportive teacher-child interactions.
		• Know how to support children socially and emotionally.
		• Recognize pedagogical strategies in high-quality ECEC (definitions, examples)
		• Know the main factors that help in choosing the appropriate pedagogical strategy
			Acquisition
			Discussion
			Practice
			Production
				• Reading short article
				  ▪ Reading short article
				  ▪ Watching short videos
				  ▪ Reading short handout
				  ▪ Discussing on WhatsApp (brief discussion about one of the videos)
				
				During the workshop:
				▪ Listening to the presentation (PowerPoint)
				▪ Discuss how to support children socially and emotionally.
				▪ Watching video examples of high-quality pedagogical strategies in general.
				▪ Discuss as a group high-quality pedagogical strategies
				▪ Writing reflection notes (remind the participants in the beginning of the workshop)
				▪ Reviewing the learning objectives in the end of the workshop.
				
				After the workshop (teachers' task)
				▪ Observe your adult-child interaction during the next week
				▪ Pay attention to pedagogical strategies that you use more frequently with children. Do you rely more on one particular strategy (e.g. questioning, feedback…etc.)?
				▪ Make a note of one interaction that had an extended conversation (more than 3 turns), who initiated it, what was the topic,
				▪ Writ (in your personal reflection notes) your thoughts and ideas about how to develop your interaction strategies. Be prepared to discuss your ideas and thoughts with the group next week. I will be more than happy if you want to discuss your ideas further with me individually.
					Workshop 3 summary (Table 3)
					
					• Icebreaking activity:
					  ▪ What did the children tell you about changes to the environment that they would like?
					  ▪ Can you tell us about a relationship you had as child with an adult that was warm and fun?
					
					Feedback questions via XXXXX:
					  ▪ Please rate today's work shop? (1-5 stars scale)
					  ▪ Do you have any suggestion to improve the workshop?
						10 Effective DAP Teaching Strategies (summary in Arabic)
						
						5 Ways to Support Social–Emotional Development in Early Childhood (article, summary in Arabic)
						
						Making salad (video)
						
						Building Positive Relationships with Young Children (supporting social emotional development) (video)
						
						I'm angry! I'm sad (Video)

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Workshop 4	Questioning, feedback, and discussion strategies.	By the end of the workshop, the teachers should achieve the following objectives:		Before the workshop: • Reading short article • Watching short videos • Reading short handout • Discussing some of the videos via WhatsApp. During the workshop: - Listening to the presentation (PowerPoint) - Watching video examples of questioning, feedback, and discussion interaction strategies. - Discuss as a group questioning, feedback, discussing strategies as interaction strategies. - Writing reflection notes (remind the participants in the beginning of the workshop) - Reviewing the learning objectives in the end of the workshop. After the workshop (teachers' task) □ Try to implement questioning, feedback, and discussing strategy whenever the educational situation is appropriate. □ Please don't hesitate to ask me any questions, discuss your thoughts, or ask me to help you in planning your teaching activities. □ I encourage you to write (personal) reflection notes, and I will be more than happy to discuss them with you in an individual meeting if you like. □ Try to realize your own questioning style, do you relay on open or close ended questions more? □ Print please the open ended questions sheet and put it in a place that you can see in your classroom to help you asking more open ended questions (Appendix B + Translated copy). □ Record (in your phone) some of your conversations with children and listen to them later (I will be happy to listen to them with you). I recommend that you record few minutes only for 2or 3 conversations during	• Icebreaking activity (Vevox): What are the main strategies that you use in your class to interact with children? (Word cloud to find out the main strategies that teachers are using to interact with children) • Present during the presentation/ send via WhatsApp a translated copy of open-ended questions reminder sheet (Appendix B) • Reviewing the learning objectivises in the end of the workshop. • Feedback questions via Vevox: □ Please rate today's work shop ? (1-5 stars scale) □ Do you have any suggestion to improve the workshop?	Skilful questioning: the beating heart of good pedagogy) (article, summary in Arabic) Intentional teaching: Extending children's ideas (video) Why don't cows live in the water? (video) Making bread (video) Early Childhood Pedagogy- Questioning (video) (will be discussed via WhatsApp before the workshop) Play Based Learning: Open Ended Questions (video) (will be discussed via WhatsApp before the workshop) Sophie rolls bottles (video) (will be send and discussed after the workshop)	some videos will be discussed before/ after the workshop. I found that it is a good idea to keep the teachers engaged and think about the workshop content if I send some videos and articles and discuss them before, during, and after the workshops. During the pilot the teachers liked the idea and they didn't mind to interact and discuss via WhatsApp between the sessions. Sending a reminder about the tasks via WhatsApp. From my experience in the pilot study, the teachers did not send me any responds (recorded or written), however, when I talked to them during the post-interviews they told my some examples of their implementations of what they have learned and their trials to do the tasks that they been asked to do.
Questioning, feedback, discussing 30-03-2022	- Definition (Questioning, Feedback, and Discussing as a pedagogical interaction strategies). - Importance of Questioning, Feedback, and Discussing as a pedagogical interaction strategies - Using Questioning to Optimise Children's Learning - Keys to using feedback to optimise children's learning (how & when). - Key to using discussion as an interaction strategy to optimize children's learning.	• Define questioning, feedback, and discussion strategies. • Know the importance of questioning feedback, and discussing strategies. • Recognize different types of questions. • Know how to ask meaningful questions that optimize children's learning. • Realize their own questioning style (strengths and weaknesses) in using questions to promote children's learning. • Know the keys to using feedback to optimise children's learning (how & when). • Know the keys to using discussion as an interaction strategy to optimize children's learning.	Acquisition Discussion Practice Investigation Collaboration Production			

Workshop 5

Problem-solving strategy

13-04-2022

Problem-solving strategy
- Problem-solving definition
- Review interaction strategies in workshop (3&4) and mention their relation to Problem-solving strategy
- Problem-solving strategy importance as a pedagogical interaction strategy
- When and how to use Problem-solving strategy
- Steps of problem-solving strategy.
- Examples of using Problem-solving strategy (how we benefit from the problems that we faced in ECEC and use them as problems to solve/ learning opportunity)

By the end of the workshop, the teachers should achieve the following objectives:
- Know Problem-solving definition
- Know interaction strategies that are relation to Problem-solving strategy (workshop 4)
- Know Problem-solving strategy importance as a pedagogical interaction strategy
- Give examples of when and how to use Problem-solving strategy as a pedagogical interaction strategy.
- Know the steps of problem-solving strategy.
- Give examples of how they can benefit from the problems that they face (almost daily) in ECEC and use them as problems to solve with children.
- Plan Problem-Solving activities.

| Acquisition |
| Discussion |
| Practice |
| Production |
| Investigation |
| Collaboration |

the next week. Try to analyze your interaction regarding the strategies that we discussed today (feedback, discussing, questioning). Do you rely on one strategy more than the others? Do you think your discussion overall optimize the children's learning? Is there anything you wish that you did/said?

Before the workshop:
- Icebreaking activity via Vevox:
  - Connecting 9 points: 3 groups of 3, the group members cooperate to solve the problem. (Appendix C)
- Feedback questions via Vevox by the end of the workshop:
  - Please rate today's work shop? (1-5 stars scale)
  - Do you have any suggestion to improve the workshop?

- Reading short article
- Watching short videos
- Reading short handout
- Discussing some of the videos via WhatsApp.

During the workshop:

- Listening to the presentation (PowerPoint)

- Watching video examples of problem-solving interaction strategy.

- Discuss as a small groups (3groups of 3) problem-solving strategy/give examples.

- Writing reflection notes (remind the participants in the beginning of the workshop)

- Reviewing the learning objectives in the end of the workshop.

After the workshop (teachers' task):
- Try to use the problems that you face daily as a problem-solving activity. For example, you planed for an activity and didn't work, ask the children to solve this problem with you (remember the problem solving steeps).
- Don't forget to take some pictures or videos to share them with us.
- I will send some more videos on WhatsApp related to strategies that we have been discussed, so far. I will be more than happy to discuss them with you and hear your opinion about them.

Problem Solving for Preschoolers: 9 Ways to Strengthen Their Skills (Article) (translated in Arabic)

Learning Problem Solving (video) (will be sent and discussed briefly before the workshop)

Extending children's ideas/The problem of the fence (video) (will be discussed during the workshop)

It won't fit through! What will we do? (video) (will be discussed during the workshop)

Supporting creative and critical thinking (video) (will be sent and discussed after the workshop)

Workshop 6	By the end of the workshop, the teachers should achieve the following objectives:		Before the workshop:	

Sustained-shared thinking strategy
 	
11-05-2022
	Sustained-shared thinking strategy:
	
	Review interaction strategies (workshops 4&5) questioning, feedback, discussion and problem-solving, as a wrap-up and as introduction to sustained-shared thinking (SST) strategy (acknowledging that if the participants have the questioning, feedback, discussion and problem-solving right they will be engaging with SST).
	
	▫ Sustained-shared thinking strategy definition
	▫ Sustained-shared thinking as an interaction strategy.
	▫ Why, when, and how to using Sustained-shared thinking strategy.
	▫ Planning and using children's ideas for Sustained-shared thinking activities.
	▫ Examples (videos)
	▫ Review all the 6 workshops and connect them together (to form the big picture of the initiative)
		□ Know how and when, to use the interaction strategies that been discussed during the initiative.
		□ Define SST as a pedagogical strategy.
		□ Give examples of when and how they can use SST strategy to interact with children.
		□ Know how to plan and implement SST activities based on children's ideas and interests.
		□ Connect the 6 workshops together and know the relation between them (quality and TCI)
			Acquisition
			Discussion
			Practice
			Production
			Investigation
			Collaboration
				• Icebreaking activity:
				  What is the most interesting activity you did with children? Why was it interesting in your opinion? Did you try to extend the activity since it was an interesting activity?
				
				• Feedback questions via Vevox by the end of the workshop:
				  □ Please rate today's work shop? (1-5 stars scale)
				  □ Do you have any suggestion to improve the workshop?
				
				Sustained shared thinking (Article)
				(summary in Arabic)
				Sustained shared thinking (video)
				Responding to children's ideas and interests (video)
				Discovering—Sustained, shared conversation (video)
				Play and learning 5 (video)
				Play and learning (video)
					Not all videos will be discussed during the workshop. Some videos will be discussed before or after the workshop.

During the workshop:

- Listening to the presentation (PowerPoint)

- Watching video examples of SST strategy:

□ Discuss as a group SST strategy (when, why, and how)

□ Writing reflection notes (remind the participants in the beginning of the workshop)

□ Reviewing the learning objectives in the end of the workshop.

□ Discussing how to plan activates based on the children's ideas and interests.

After the workshop (teachers' task):

□ Plan a SST activity based on children's interests or ideas. Don't forget to take some pictures or videos to share them with us via our WhatsApp group, take some reflection notes while you implement the activity (that will help you document the children's ideas to expand the activity).

□ Reading short article
□ Watching short videos
□ Reading short handout
□ Discussing some of the videos via WhatsApp.

Acquisition

Discussion

Collaboration

Production

Practice

Investigation

Learning Types Reference:

Acquisition

Universal Design for Learning (UDL) Prompts:

See the DCU 'ABC to VLE+ App Wheel' for further guidance on Acquisition activities.

Collaboration

Universal Design for Learning (UDL) Prompts:

See the DCU 'ABC to VLE+ App Wheel' for further guidance on Collaboration activities.

Discussion

Universal Design for Learning (UDL) Prompts:

See the DCU 'ABC to VLE+ App Wheel' for further guidance on Discussion activities.

Investigation

Universal Design for Learning (UDL) Prompts:

See the DCU 'ABC to VLE+ App Wheel' for further guidance on Investigation activities.

Practice

Universal Design for Learning (UDL) Prompts:

See the DCU 'ABC to VLE+ App Wheel' for further guidance on Practice activities.

Production

Universal Design for Learning (UDL) Prompts:

See the DCU 'ABC to VLE+ App Wheel' for further guidance on Production activities.

Action Plan

Action Plan Item	Who/When
Teachers' individual interviews	Interviews 14-15/03-–2022 (9 teachers)
CPD Workshop 1: (120 minutes)	Workshop (1) 10-03-2022 (all kindergarten teachers attended, 9 teachers decide to participate in the study)
Introduction/ Goals of the Ministry of Education and education's role in Saudi Vision 2030	
ECEC quality, especially TCIQ (importance, meaning, indicators, measurements)	
Focus group: 40 minutes	Focus group: 16-03-2022 (9 teachers attended)
CPD Workshop 2: (120 minutes)	Workshop (2) 16-03-2022 (9 teachers attended)
Learning environment (indoor and outdoor)	
CPD Workshop 3: (120 minutes)	Workshop (3) 17-03-2022 (9 teachers attended)
Pedagogical strategies (interaction strategies)	
Workshop 2 &3 implementation (in class)	20/30-03-2022
CPD Workshop 4: (120 minutes)	Workshop (4) 30-03-2022
Questioning, Feedback, and Discussion	
Mentoring and implementation(in class)	31-03/ 13-04-2022
CPD Workshop 5: (120 minutes)	Workshop (5) 13-04-2022
Problem- solving strategy	
Mentoring and implementation(in class)	14-04/ 11-05-2022
CPD Workshop 6: (120 minutes)	Workshop (6) 11-05-2022
Sustained-shared thinking strategy	
Mentoring and implementation(in class)	12-05/9-06-2022
Second set of individual interviews (teachers' perceptions of TCIQ and the CPD initiative) Reflect on the CPD in general (focus group)	12,13, &14 -06-2022 16-06-2022

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Reflection Notes (Workshop)

Date _____

Workshop Number _____

Workshop main ideas:

....

....

....

....

....

My reflection:

....

....

....

....

....

Things I have learned today and will implement in my classroom:

....

....

....

....

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Reflection Notes (In Class)

Date _____

My goals:

....

....

....

What did I do to achieve my goals?

....

....

....

How do I feel?

....

....

....

What can I do in the future to enhance my Practice?

....

....

....

Sample Reflection Notes

Reflection notes

Reflection is a powerful form of learning as it not only encourages the learner to make sense of what happened, it also encourages them to focus on what they could do differently next time. The act of completing written reflection notes not only brings subconscious learning into the conscious mind, but it also provides some discussion points for the next session with the mentor. A sample reflection note is shown below. Once again you may choose to change this.

Reflection notes can be completed after a key learning event related to an action point or any other event.

The mentor is encouraged to complete a reflection note after each discussion with the mentee to help improve their practice as a mentor

Sample reflection notes

Briefly describe the event that you are reflecting on

What did you think/feel whilst it was happening?

What have you learnt about the event, e.g. what you could have done differently or what did you do well?

What will you do differently as a result of reflecting on this event?

Sample Reflection Notes (Bournemouth University, n.d., p. 17)

French (2013) p.73, adapted from Dukes and Smith (2007, p. 5) and NCCA (2009).
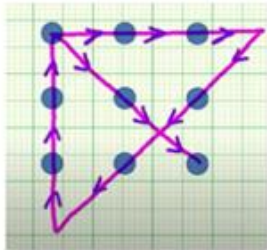
Appendix C

Connecting 9 points

Without lifting up your pencil, connect the 9 points with 4 straight line segments.
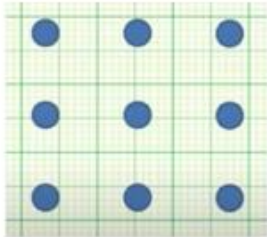
Solution

https://www.youtube.com/watch?v=XgngdrNNijgU

Workshop 1: Introduction to the initiative

Interactions matter: What research says and what you can do! (article)

Supporting children's active learning (video)

Inspiring words by Crown Prince (video)
Human Capability Development Program (video)
Saudi Vision 2030 and Education (video)

Workshop 2- Learning environment.

Living spaces-Indoor learning environments
Environments & materials for supporting physical play (video)

Building Supportive Environments: Setting Rules and Expectations (video)
Anji Play - Barrels, Ladders, Sandbags (video)
Children at Play in Anji County, China Kindergartens (video)
True play development|Anji China (video)

Workshop 3 <mark>**- General introduction to pedagogical (interaction) strategies in high-quality ECEC.**</mark>

10 Effective DAP Teaching Strategies (article)
5 Ways to Support Social–Emotional Development in Early Childhood (article)

Making salad (video)
Building Positive Relationships with Young Children (supporting social emotional development) (video)
I'm angry! I'm sad (Video)

Workshop 4 <mark>**- Questioning, feedback, discussing**</mark>

Skillful questioning: the beating heart of good pedagogy (article)
Intentional teaching: Extending children's ideas (video)
Why don't cows live in the water? (video)
Making bread (video)
Early Childhood Pedagogy: Questioning (video)
Play Based Learning: Open Ended Questions (video)
Sophie rolls bottles (video)

Workshop 5 - <mark>**Problem- solving strategy**</mark>

Problem Solving for Preschoolers: 9 Ways to Strengthen Their Skills
Learning Problem Solving (video)
Extending children's ideas/The problem of the fence (video)
It won't fit through! What will we do? (video)
Supporting creative and critical thinking (video)

Workshop 6- <mark>**Sustained-shared thinking strategy**</mark>

Sustained shared thinking (Article)
Sustained shared thinking (video)
Responding to children's ideas and interests (video)
Discovering—Sustained, shared conversation (video)
Play and learning 5 (video)
Play and learning (video)

Appendix Q: Handout Example

Pedagogical Interaction Strategies: Questioning

Questioning as an interaction strategy:

Offering children questions, "Provides them with opportunity to think and to use language in a fundamental manner by allowing them to report observations, describe experiences, and make predictions" (Ramsey & Fowler, 2004, p. 33).

http://pixabay.com/images

Why Questioning Is an Important Pedagogical (Interaction) Strategy

Questioning is an important pedagogical strategy for several reasons

· Helps children reflect on their learning and feelings.
· Involves children in active learning and discussion.
· Encourages children to use their cognitive abilities, such as problem-solving.
· Extends children's socio-dramatic and imaginative skills.
· Promotes children's sense of wonder and curiosity.
·Helps develop children's language skills.
·Enables teachers to get to know children's likes, dislikes and what they know and understand

Types of Questions

Teachers in kindergarten use two main types of questions - open-ended questions and closed-ended questions. Closed-ended questions usually limit the child's answer to a specific, clear answer, such as finding out if the child knows the names of specific things (e.g., animals, tools, colors, foods) or classroom rules. Such questions require children to remember what they have learned. Therefore, some teachers rely on such questions to check what children know and what they need to be taught. However, children can find closed-ended questions boring and might ignore them.
In contrast, open-ended questions, which have no right or wrong answers, no specific one answer only. Open-ended questions promote learning across diverse domains of thinking, encouraging children to explore, imagine, and create instead of merely regurgitating knowledge. Open-ended questions can make children feel there are no right or wrong answers but rather many possible answers, give many openings for them to answer and many ways to express knowledge, thinking, feelings, and beliefs. Such questions can be used when teachers want to find out how children are thinking and making sense of the social and natural world. Open-ended questions require the child to share their thoughts, understanding, and feelings with others and enhance problem-solving, science, and mathematical skills.

By the end of the workshop, YOU WILL:

· Define questioning as an interaction strategies.
· Know the importance of questioning strategy.
· Recognize different types of questions.
· Know how to ask meaningful questions that optimize children's learning.
· Realize their own questioning style, strengths, and weaknesses in using questions to promote children's learning.

Keys to Using Questioning to Optimise Children's Learning

Asking questions that prompt learning is a skill that takes time to hone. As with any interaction strategy, questioning will be more effective if teachers have strong, positive relationships with children, if they guide the classroom in a developmentally appropriate way, and if the child-teacher ratio allows for meaningful conversations.
Effective questioning techniques include only asking one short question at a time and giving children time to think and respond.
Teachers should review their questioning style, whether they have a balance between open- and closed-ended questions, whether their questions encourage learning and take into account developmental stage, and any other strengths and weaknesses.

94.5% of ECEC teachers' questions are close-ended, requiring a simple recall of information, expected behaviour, choosing between limited choices. Only 5.5% of teachers' questions are open-ended questions including encouragement or sustained shared thinking (Siraj-Blatchford & Manni, 2008)

Open-ended Questions Examples:

· Tell me about what you are doing?
· Why do you think this happened?
· What do you think will happen next?
· Why do you think that will happen next?
· How can we solve this problem?
· What else we can do?
· How did you do this?
· How did you build this high building with all these wooden blocks?

You can put a copy of figure (I) in your classroom to help you asking more questions that are open-ended

Figure (1): French (2013) p.73, adapted from Dukes and Smith (2007, p. 5) and NCCA (2009).

(Translated)

الأسئلة الماهرة: القلب النابض لعلم التربية الجيد

بقلم: <u>جوناثان دوهرتي</u>

تم النشر في: <u>9 يوليو 2017</u>

المشكلة التي تواجهها المعلمات

الأسئلة هي جزء لا يتجزأ من الحياة الصفية وضرورية للمخزون التربوي لكل معلم. وهي أيضًا أحد عناصر التقييم الفعال، يخدم طرح الأسئلة العديد من الأغراض: فهو يشرك الطلاب في عملية التعلم ويوفر فرصًا لطرح الأسئلة بأنفسهم. إنه يتحدى مستويات التفكير ويعلم ما إذا كان الطلاب مستعدين للتقدم في تعلمهم. الأسئلة التي تبحث في المعنى الأعمق تعزز مهارات التفكير النقدي وقدرات المستوى الأعلى مثل حل المشكلات، وتشجع أنواع المتعلمين المرنين والمفكرين النقديين اللازمين في القرن الحادي والعشرين.

يعتبر طرح الاسئلة مهارة تربوية مهمة ، ولكنها تتطلب معرفة عملية.يوجد عدم توازن في الأسئلة غالبًا في التدريس ، قائلاً إن هناك هيمنة واعتماد مفرط على الأسئلة المغلقة ، مما يوفر فقط عددًا محدودًا من الأسئلة

<u>التقييم من أجل التعلم</u>.

التقييم من أجل التعلم يقدم معلومات للمعلم اين تكمن المشكلة و كيف يمكن أن تصبح استراتيجيات طرح الأسئلة في الفصل الدراسي أكثر فاعلية ، حيث تشير الأدلة إلى أن المعلمين يطرحون الكثير من الأسئلة وأن عددًا كبيرًا جدًا من هذه الأسئلة منخفض المستوى.

ماذا يقول البحث

تم أهمية الاسدلة في الفصل بشكل جيد. يميل البحث إلى التركيز على العلاقة بين أسئلة المعلمين وإنجاز الطلاب؛ فيما يلي بعض الرسائل المهمة.

أنواع الأسئلة المستخدمة

في كثير من الأحيان ، تكون أسئلة المعلمين تنظيمية ، مثل "ما الذي نضعه دائمًا في أعلى صفحتنا لتبدأ؟" أو إرشادية بطبيعتها ، مثل "من يستطيع أن يخبرني ما هي الصفة؟" وتفشل في تطوير التعلم العميق. وجدت دراسة Wragg المبكرة (1993) أن المعلمين يستخدمون عادة ثلاثة أنواع من الأسئلة:

1. متعلق بالإدارة ، على سبيل المثال ، "هل أنهى الجميع هذا العمل الآن؟"

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2. المعلومات المتعلقة باسترجاع المعلومات ، على سبيل المثال "كم عدد الأضلاع التي يمتلكها الشكل الرباعي؟"

3. أسئلة أعلى مرتبة ، مثل "ما هو الدليل الذي لديك لقول ذلك؟"

في دراسة Wragg ، كان 57٪ من الأسئلة متعلقة بالإدارة ، و 37٪ تتطلب استرجاع المعلومات ، و 8٪ فقط
تحدت مهارات التفكير العليا.

الأسئلة المغلقة أو المتقاربة لها مشاركة معرفية منخفضة وتؤدي إلى إجابات محدودة مثل "نعم" أو
"لا". تشجع الأسئلة المفتوحة أو المتباينة توسعًا أكبر في الإجابات وتعزز حوار الفصل الدراسي الأفضل (،Tofade
Elsner and Haines ،2013). الأسئلة المغلقة لا تزال مهمة ، ومع ذلك ، وتساعد في استعادة المعرفة ؛ لكن تابع
بحذر هنا ، حيث إن إجابات الطالب المكونة من كلمة واحدة والتي لا مفر منها تحد من الحوار في الفصل مما أدى إلى
ما أسماه الإسكندر "طقوس تقييد معرفي" (2006: ص 14). يستفيد الطلاب ذوو التحصيل المنخفض من الأسئلة
المغلقة ، مما يتيح لهم دقة أكبر في الاستجابة والتي بدورها تولد التشجيع ، بينما يستجيب الطلاب ذوو التحصيل الأعلى
بشكل أفضل للأسئلة الأكثر تحديًا (وولفولك ، 2008). من أجل تعظيم AfL في الدروس ،

التوقيت

يكون لوقت انتظار الطالب (إعطاء فترة وجيزة من الوقت للطلاب للتفكير أو التفكير قبل الإجابة) تأثير
إيجابي على التعلم. وجد Brooks and Brooks (2001) أن نهج الأسئلة السريعة يفشل في تزويد المعلمين بمعلومات
دقيقة حول فهم الطلاب. عادةً ما يكون الوقت بين طرح سؤال وإجابة الطالب حوالي ثانية واحدة. كوهين
وآخرون. (2004) يوصي بأوقات انتظار من ثلاث إلى خمس ثوانٍ للأسئلة المغلقة وما يصل إلى 15 ثانية للأسئلة
المفتوحة.

المستويات المعرفية

الأسئلة المعقدة تعزز التفكير المعقد ، كما يجادل الباحثان ديجينير وبيرن (2016). لكن هل هي حقا بهذه
البساطة؟ هناك نقص في الإجماع في الأدبيات. وجد بعض الباحثين أن الأسئلة المعرفية الأعلى تتفوق على الأسئلة
الأدنى بينما البعض الآخر لم يفعل ذلك. بشكل عام ، مستوى أسئلة المعلمين منخفض. حوالي 60٪ من الأسئلة تتوقع
فقط معلومات واقعية من الطلاب (Samson et al .2012، Lee and Kinzie). وجد (1987) أن استراتيجيات
الأسئلة الإدراكية العليا لها تأثير إيجابي على التعلم ، لكن هذا لم يكن كبيرًا كما تم اقتراحه سابقًا. إن مجرد طرح أسئلة
معرفية أعلى لا ينتج عنه بالضرورة ردود معرفية أعلى من الطلاب.

بشكل عام ، فإن طرح الأسئلة على مستوى منخفض والذي يهدف إلى الاستذكار والفهم الأساسي سوف يستقر على التعلم في الفصل الدراسي بسرعة. يمكن أن تنتج أسئلة المستوى الأعلى تعلمًا وتفكيرًا أعمق ، ولكن يجب تحقيق توازن. كلاهما له مكان ويوصى بمزيج من الأسئلة.

النهج الفعال

على مر السنين ، تم تطوير تصنيفات التصنيف لتوجيه استجواب المعلم (انظر ؛ (1964) Krathwohl (1986) Wilen و (1991) Morgan and Saxton كأمثلة مبكرة). تُظهر "طريقة طرح الأسئلة عالية الفعالية" الخاصة بـ Hannel و Hannel (2005) كيف تعزز أسئلة المعلم مشاركة الطلاب ، وتتمثل الطريقة المثيرة للاهتمام في "تسلسل أسئلة المعلم والطالب" (Dekker-Groen ، 2015). في مجال محو الأمية ، ابتكر ديجنر وبيرن (2016) `` استمرارية التساؤل عن التعقيد " المكونة من ستة مستويات لتقديم تحدٍ متزايد على كل مستوى معرفي. يحتوي موقع (Shirley Clarke (www.shirleyclarke-education.org على مجموعة واسعة من الموارد العملية حول استراتيجيات طرح الأسئلة التي أثبتت جدواها.

ربما يكون أكثر إطار عمل الأسئلة شهرة هو تصنيف بلوم المعرفي (1956) ، والذي تمت مراجعته لاحقًا بواسطة Anderson and Krathwohl (2001). في هذا التسلسل الهرمي المكون من ستة مستويات ، تقيس الأسئلة ذات الترتيب الأدنى الفهم ؛ تطبيق معرفة المقياس متوسط المستوى ، وطرح الأسئلة عالية المستوى يؤدي إلى التوليف والتحليل والتقييم.

المعرفة

"هل تتذكر ...؟"

الفهم

"أخبرني كيف يعمل هذا ..."

التطبيق

"في أي مكان آخر رأيت هذا النمط؟" _

تحليل

"اشرح لي ما يحدث هنا؟"

تجميع

"ما هي الاستنتاجات التي يمكنك استخلاصها من هذا؟"

التقييم

"هل يمكنك قياس مدى فعالية ذلك؟"

تعد كلمات التشغيل طريقة فعالة لصياغة الأسئلة ، كما هو موضح في الجدول 1.

أفكار لتجربتها في الفصل

هناك العديد من أساليب الاستجواب للاختيار من بينها لتعزيز التعلم وتقديم معلومات تقييم تكوينية ممتازة:

1. عدم التدخل. يمكن لأي شخص أن يجيب ، مما يتجنب نفس عدد قليل من الطلاب من إجابة الأسئلة.

2. في المقعد الساخن. يتناوب الطلاب على الجلوس في "المقعد الساخن" والإجابة على الأسئلة.

3. اسأل الخبير. يطرح المعلم أسئلة على الطالب حول موضوع معين ، ويوسع ذلك لتشجيع الطلاب الآخرين على طرح الأسئلة.

4. اسأل الفصل. يعرض المعلم عددًا من الأسئلة المكتوبة لتحفيز التفكير في الصور أو الأشياء في الفصل.

5. فكر-زوج-شارك.يتيح الوقت لمشاركة الأفكار مع شريك والرد على سؤال مطروح.

6. اتصل بصديق. استراتيجية مفيدة يرشح فيها الطالب آخر للإجابة على سؤال المعلم. يقدم الطالب الأول أيضًا إجابة.

7. التنصت. عندما تعمل المجموعات ، يتنقل المعلم حول الفصل ويطرح أسئلة على المجموعات بناءً على ما يسمع في مناقشاتهم.

8. مربع السؤال. يحتوي الصندوق الفعلي على سلسلة من الأسئلة التي صممها المعلم. يتم تخصيص الوقت في نهاية الأسبوع لاختيار البعض لمناقشته كصف دراسي.

9. إليكم الجواب ، ما هو السؤال؟ عمدًا إلى الخلف لتشجيع التفكير خارج الصندوق.

10.أكثر مني. يسأل المعلم الطالب سؤالاً ويختصر الإجابة عن عمد لإشراك طالب آخر للبناء على هذه الإجابة.

أشياء يجب مراعاتها

"من الأفضل أن يكون لديك فصل دراسي مليء بالأسئلة التي لم تتم الإجابة عليها من الإجابات التي لم تتم الإجابة عليها".(1991 ، Morgan and Saxton)

الأسئلة الجيدة تطور المناقشة وتدعو إلى الاستكشاف. يمكن للأسئلة السيئة أن تخنق الطلاب وتشكل ضغوطًا لا داعي لها على الطلاب. يمكن أن يؤدي استخدام مجموعة متنوعة من أنواع الأسئلة لإثراء تقييمك إلى تحويل فصلك الدراسي إلى "فصل دراسي لطرح الأسئلة". تعتبر روح الفصل الدراسي والتنظيم مع الاستفسار في صميمه أمرًا فعالاً ، حيث يهيمن الحديث الهادف ويطرح المعلمون أسئلة أقل.الحواري الاستخدام الفعال للكلام في التدريس والتعلم و يستخدم الأسئلة الماهرة لتوسيع نطاق التفكير حيث يتم بناء إجابات أسئلة المعلمين بدلاً من مجرد تلقيها. يسمح الحوار

للمعلم بالرد على إجابات الطلاب وإعادة توجيههم إذا لزم الأمر. تتسلسل التبادلات معًا ، وتؤدي التعليقات من الأسئلة إلى التفكير إلى الأمام ويتم توسيع إجابات الطلاب. الأسئلة هي من بين أقوى أدوات التدريس لدينا ، واعتماد أفضل الممارسات سيعزز بشكل كبير جودة التدريس والتعلم.

أسئلة للتفكير فيها / مناقشتها

هل فصلي فصل "اسئلة مفتوحة"؟

ما أنواع الأسئلة وكم عدد الأسئلة التي أطرحها عادةً في تدريسي؟

هل الأسئلة التي أطرحها تستهدف التفكير العالي وتزيد من المعرفة؟ هل هذا صحيح في تدريسي في جميع المواد؟

إرشادات تقديم التأثير

تأثير عملية مراجعة الأقران

هيئة تحرير التأثير

استراتيجيات التفاعل التربوية: الأسئلة

الأسئلة كاستراتيجية للتفاعل مع الأطفال

طرح نشاط على الأطفال "يوفر لهم الفرصة للتفكير واستخدام اللغة بطريقة أساسية من خلال السماح لهم بالإبلاغ عن الملاحظات ووصف (Ramsey & Fowler، 2004، p. 18). الخبرات والتنبؤات.

http://pixabay.com/images

لماذا تعتبر الأسئلة إستراتيجية تربوية (تفاعلية) مهمة

* يعتبر طرح الأسئلة استراتيجية تربوية مهمة لعدة أسباب
  * يساعد الأطفال على التفكير في تعلمهم ومشاعرهم.
  * إشراك الأطفال في التعلم النشط والمتكرر.
  * يشجع الأطفال على استخدام قدراتهم المعرفية مثل حل المشكلات.
  * يوسع مهارات الأطفال الاجتماعية والخيالية.
  * يعزز شعور الأطفال بالدهشة والفضول.
  * يساعد على تنمية مهارات الأطفال اللغوية.
  * تمكن المعلمين من التعرف على ما يحبه الأطفال وما يكرهون وما يعرفونه ويفهمونه.

أنواع الأسئلة

تستخدم المعلمات في رياض الأطفال نوعين رئيسيين من الأسئلة: الأسئلة المفتوحة والأسئلة المغلقة. عادة ما تحدد الأسئلة المغلقة بإجابة محددة مثل معرفة ما إذا كان الطفل يعرف أسماء أشياء معينة (مثل الحيوانات، والأدوات، والألوان، والأطعمة) أو قواعد الفصل الدراسي. تكشف مثل هذه الأسئلة عما تعلمه الأطفال تذكر ما تعلموه لذلك يحتاج بعض المعلمين على مثل هذه الأسئلة لتتعلق مما يعرفه الأطفال وما يحتاجون إلى تعليمه. ومع ذلك يمكن للأطفال أن يجدوا الأسئلة ذات النهايات المغلقة مملة وقد يتجاهلونها.

في المقابل، الأسئلة المفتوحة، التي ليس لها إجابات صحيحة أو خاطئة، لا يوجد إجابة واحدة محددة الأسئلة المفتوحة تعبر عن مجالات مختلفة من التفكير وتشجع الأطفال على الاستكشاف والتخيل والإبداع بدلاً من مجرد تجدد المعرفة. يمكن للأسئلة المفتوحة أن تجعل الأطفال يشعرون أنه لا توجد إجابات صحيحة أو خاطئة من هذه العديد من الإجابات المحتملة، وتعطيهم العديد من الفرص للإجابة من العديد من الطرق للتعبير عن المعرفة والتفكير والمشاعر والمعتقدات. يمكن استخدام مثل هذه الأسئلة عندما يريد المعلمون معرفة كيف يفكر الأطفال ويفهمون العالم الاجتماعي والطبيعي. تتطلب الأسئلة المفتوحة من الطفل مشاركة أكثر، وفهمه ومشاعره مع الآخرين وتعزيز مهارات حل المشكلات والعلوم والرياضيات.

من أهداف ورقتنا اليوم التعرف على

* الأسئلة كاستراتيجية للتفاعل مع الأطفال
* أهمية الأسئلة كاستراتيجية للتفاعل مع الأطفال
* أنواع الأسئلة المختلفة
* كيفية طرح أسئلة تعزز تعلم الأطفال
* النمط الخامس بكل مطبة في طرح الأسئلة (توابع القيام الصعب)

مفاتيح استخدام استراتيجية طرح الأسئلة لتحسين تعلم الأطفال

طرح الأسئلة التي تعزز تعلم الأطفال هي مهارة تستغرق وقتًا لصقلها. كما هو الحال مع أي استراتيجية تفاعل، سيكون طرح الأسئلة أكثر فاعلية إذا كان للمعلمات علاقات قوية وإيجابية مع الأطفال، إذا قاموا بتوجيه الفصل الدراسي بطريقة مناسبة من الناحية التنميية، وإذا كانت نسبة الأطفال إلى المعلمات تسمح بإجراء محادثات هادفة.

تتضمن أساليب طرح الأسئلة الفعالة طرح سؤال قصير واحد فقط في كل مرة وإعطاء الأطفال وقتًا للتفكير والرد.

يجب على المعلمات مراجعة أسلوب طرح الأسئلة لديهم سواء كان توازن بين الأسئلة المفتوحة والمغلقة، وما إذا كانت أسئلتهم تشجع التعلم

في دراسة سولزلا تم إجراؤها في بريطانيا، اجتمعت على تحليل 1967 سؤالاً كانت موالها المعلمات من 12 رياض الأطفال لـ 28 معلمة خلال 400 ساعة من الملاحظة، وجدت الدراسة أن 94.5٪ من جميع الأسئلة التي طرحها المعلمات كانت مغلقة، وتطلب استخداما سبطا للمعلومات أو الاختيار من الخيارات المحدودة، أو حتى الرد في بعض الأحيان على الإطلاق

في المقابل، كانت 5.5٪ فقط أسئلة مطروحة في تلك التشجيع أو التفكير المشاركة المستمر، أي حيث يصل الطفل والمعلمة لحل مشكلة أو توضيح مفهوم أو القيام لأنشطة أو توسيع النشاط

(Siraj-Blatchford & Manni, 2008)

أمثلة على الأسئلة المفتوحة

أخبرني عما تفعله؟

لماذا تعتقد أن هذا حدث؟

ماذا تعتقد سوف يحدث بعد ذلك؟

لماذا تعتقد أن هذا سيحدث بعد ذلك؟

كيف يمكننا حل هذه المشكلة؟

ماذا يمكننا أن نفعل غير ذلك؟

كيف فعلت هذا؟

* كيف بنيت هذا المبنى العالي بكل هذه الكتل الخشبية؟

يمكنك وضع نسخة من الشكل (1) في الفصل الدراسي الخاص بك لمساعدتك

في طرح المزيد من الأسئلة ذات النهايات المفتوحة

Figure (1): French (2013) p.73, adapted from Dukes and Smith (2007, p. 5) and NCCA (2009).

Appendix R: DCU Approval

Norah Alshbili
School of Language, Literacy and Early Childhood Education

Dr. Geraldine French
School of Language, Literacy and Early Childhood Education

Prof. Pádraig Ó Duibhir
School of Language, Literacy and Early Childhood Education

1st February 2021

REC Reference:	DCUREC/2020/266
Proposal Title:	Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality before and after a Continuing Professional Development Initiative
Applicant(s):	Norah Alshbili, Dr. Geraldine French, Prof. Pádraig Ó Duibhir

Dear Colleagues,

Further to expedited review, the DCU Research Ethics Committee approves this research proposal.

Materials used to recruit participants should note that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee.

Should substantial modifications to the research protocol be required at a later stage, a further amendment submission should be made to the REC.

Yours sincerely,

Dr Geraldine Scanlon
Chairperson
DCU Research Ethics Committee

Appendix S: PNU Approval

Kingdom of Saudi Arabia
Ministry of Education
Princess Nourah bint
Abdulrahman University
(048)

**Graduate Studies and Scientific
Research Vice- Rectorate**

المملكة العربية السعودية
وزارة التعليم
جامعة الأميرة
نورة بنت عبدالرحمن
(٤٨)

وكالة الجامعة للدراسات العليا والبحث العلمي

IRB Registration Number with KACST, KSA: H-01-R-059

January 24, 2021
IRB Log Number: 21-0030
Project Title: Saudi Kindergarten Teachers' Perceptions of Teacher-Child Interaction Quality before and after a Continuing Professional Development Initiative
Category of Approval: EXEMPT

Dear Norah Hamad Alshbili, Dr. Geraldine French, Prof. Pádraig Ó Duibhir, and Dr. Aljawharh Alsukah,

Thank you for submitting your proposal to the PNU Institutional Review Board. Your proposal was evaluated considering the national regulations that govern the protection of human subjects. The IRB has determined that your proposed project poses no more than minimal risk to the participants. Therefore, your proposal has been deemed ***EXEMPT*** from IRB review. Please note that this approval is from the research ethics perspective only. You will still need to get permission from the head of the department in PNU or an external institution to commence data collection.

Please note that the research must be conducted according to the proposal submitted to the PNU IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For **any** proposed changes in your research protocol, please submit a Request for Modification form to the PNU IRB. Please be aware that changes to the research protocol may prevent the research from qualifying for exempt review and require submission of a new IRB application or other materials to the PNU IRB. In addition, if an unexpected situation or adverse event happens during your investigation, please notify the PNU IRB as soon as possible. If notified, we will ask for a complete explanation of the event and your response.

Please be advised that regulations require that you submit a progress report on your research every 6 months. Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. You are also required to submit any manuscript resulting from this research for approval by IRB before submission to journals for publication.

The researcher is personally liable for plagiarism and any violations of intellectual property rights.

For statistical services you are advised to contact the Data Clinic at the Health Sciences Research Center (hsrc-DC@pnu.edu.sa) or the Scientific Research Center at the Deanship of Scientific Research (dsr-rsc@pnu.edu.sa) extension 30711.

We wish you well as you proceed with the study. Should you have additional questions or require clarification of the contents of this letter, please contact me.

You can apply for research funding at (DSR-RS@pnu.edu.sa).

Sincerely Yours,

Prof. Omar H. Kasule Sr.
Chairman, Institutional Review Board (IRB)
Princess Nourah bin Abdulrahman University, Riyadh, KSA
Tel: +966 548867916
E-mail: irb@pnu.edu.sa; ohkasule@pnu.edu.sa

جامعة الأميرة نورة بنت عبدالرحمن
مجلس المراجعة المؤسسي
Institutional Review
Board (IRB)   24 JAN 2021

الرقـــم: التاريـــخ: /   /   ١٤هـ   المشفوعات: