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Stakeholders' Perspectives of Early Childhood Education Language and Literacy Laboratories in the United Arab Emirates

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Abstract. Language and literacy laboratories (LLs) have been instrumental in the preparation of early childhood education (ECE), as reading is considered pivotal for novice learners. This study focused on the perspectives of pre- and in-service teachers and their instructors on the level of readiness to teach literacy through LLs using the professional development school model of teacher education. The study employed a pragmatism-driven sequential mixed-methods research design consisting of a self-administered survey of 720 respondents who were randomly selected during the 2021–2022 academic year. In-depth interviews were subsequently conducted with 42 pre- and in-service teachers and their instructors. Following the descriptive analysis of the quantitative data, the qualitative data were thematically analyzed. The three emergent themes were participants' experiences in the ECE program, their views on the implementation of LLs, and the effectiveness of literacy strategies. The paper concludes with recommendations for the strategic implementation of LLs and adoption of multiple language strategies for language teaching and assessment.

Keywords: early childhood education; language and literacy laboratories; professional development school model; United Arab Emirates

1. Introduction

In the United Arab Emirates (UAE), early childhood education (ECE) contributes to supporting the National Agenda for Education as well as the success of initiatives such as the Program for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) (United Nations, 2017). It is important that learning environments offer language-learning opportunities; thus, language and literacy laboratories (LLs) are crucial in ECE

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teacher preparation and support during field-based experiences. According to Maxwell et al. (2018), LLLs allow universities and elementary schools to collaborate and to enhance teaching and collaborative skills. Moreover, teachers can apply what they have learnt in these laboratories.

A central pillar of ECE programs involves investment in preparing high-quality, motivated teachers who possess competencies and up-to-date knowledge of the curriculum to effectively develop learners' language and literacy skills (Pianta et al., 2016). Literacy programs support children with different abilities and additional needs. Investment in innovative teacher training and capacity-building initiatives is therefore essential, because teaching is a multifaceted activity that requires a variety of skills and knowledge (Bransford et al., 2005; Stürmer et al., 2016). It is also important to implement customized and contextualized instructional strategies that match individual student needs (AlShamsi et al., 2022). Because of the demands inherent in these roles, pre-service teachers (PSTs) often feel unprepared or experience high levels of anxiety while undergoing classroom practice (Ismail & Jarrah, 2019).

Some of this anxiety may be attributed to the educational preparation of bilingual Emirati children (AlShamsi & Alsheikh, 2022). ECE programs in the UAE target 4- to 9-year-old children and aim at offering high-quality instruction (von Suchodoletz et al., 2020). Over the years, ECE in the UAE has increasingly recruited teachers from the West to fill the gap in the shortage of teachers (von Suchodoletz et al., 2020). Naturally, these expatriates also bring their cultural experiences, which influence the teaching phases of the education system. Consequently, more strategic efforts are needed in the preparation of teachers in ECE, which rationalizes the importance of LLLs to enhance teachers' preparation for the classroom.

Professional development models of teacher education are intended to facilitate the creation of communities of practice to assist trainee teachers. School-college partnerships are used worldwide to develop confidence and field skills among these trainees. One key aspect of the model is that it enables higher education institutions (HEIs) to provide trainee teachers with placement opportunities in schools, which exposes them to authentic teaching and learning (Dietrichson et al., 2021; Teitel, 2003). These placements are often supported by the colleges' literacy laboratories, especially when placement becomes a mandatory requirement of their degree (Maxwell et al., 2018). Given the success of such laboratories in various countries (Walker et al., 2020), the establishment of LLLs in the UAE, in collaboration with the educational regulatory bodies, seems appropriate as an essential part of a teacher's college education.

Therefore, this pragmatic sequential mixed-methods study aimed to identify the factors that contribute to the scope of LLLs in the UAE from the perspective of key stakeholders, comprising in-service teachers (ISTs) and PSTs and their instructors. The study further aimed to explore these results in depth through qualitative analysis. To achieve these objectives, the following research questions were formulated:

1. What factors do ECE stakeholders consider pivotal in implementing language and literacy teaching and assessment strategies?
2. How instrumental are LLLs in international ECE programs?
3. In what ways can educational partnerships enhance LLLs and the teaching and assessment practices of education stakeholders?

1.1 The Present Study

The study context is an HEI in the UAE that offers an applied ECE teaching program. This program focuses on the skills and competency development of ECE pre-service homeroom teachers of English language, mathematics, and science. PSTs begin their teaching practicum (TP) as early as Year One. It is in these cohort-specific practicum courses that PSTs begin learning how to link theory to the practicum experience. To facilitate this process, they are assigned specific tasks and supervised throughout their TP experience. During TP, PSTs are expected to plan and teach lessons based on their semester level and to provide reflections after each lesson taught. The TP coordinator serves as the liaison between the HEI and the UAE's education regulatory bodies. The TP coordinator also assigns each PST a college mentor teacher (MCT) and organizes school placements according to the regulatory bodies, who then assign each student to a specific grade-level school mentor teacher (MST). This authentic experience provides each PST with a rich opportunity to link theory to practice. It also serves as a supportive practice alongside the PST's experience with LLLs to enable teaching efficacy and knowledge acquisition and better define factors that predict success through professional development.

1.2 Professional Development School Model

The professional development school (PDS) model of teacher education is associated with the Holmes Group (1986, 1990). The group's central intent was the development of the PDS model, which recognizes the associations between teaching and teaching education and the need to create partnerships to improve teaching and learning for prospective teacher education candidates and students. Researchers such as Ball and Cohen (1999) supported the PDS model, as they felt the need for a more pragmatic model of teacher professional development (TPD). Most TPD models differed from the theoretical and pedagogical contexts and were not helpful to teachers during their TP (Ball & Cohen, 1999). Teitel (2003) opined that a PDS model should involve groups of PSTs working jointly as a cohort who are placed in different schools with different teachers over the long term and for interactive internships. To test the effectiveness of the PDS model, Sandoval-Lucero et al. (2011) examined the experiences of three groups of PSTs, who showed sufficient theoretical and practical experience during their school placements. The early learning environment (Walker et al., 2020) and teacher efficacy (Haverback & Parault, 2011) are pivotal for language intervention and communication. Therefore, it is reasonable to expect that teachers who are responsible for teaching literacy are well prepared to identify difficulties and select appropriate intervention strategies.

The effectiveness of the PDS model in supporting literacy for PSTs is a topical subject in education literature. Lefever-Davis and Heller (2003) argued that PSTs should learn with children and practice the art of teaching, reading, and writing.

While examining a Teach for America program, Gabriel (2011) applied the PDS model and concluded that it was pragmatic, accommodative, and enabled teachers to address the needs of diverse learners within their environments. More recently, Herro et al. (2019) described a faculty-in-residence program that applied a practice-based PDS model to a sample of three STEAM (science, technology, engineering, art, and mathematics) teachers with different needs. The authors concluded that this PDS model was more responsive to the needs of learners, as it helped teachers finetune their instructional practices. This study modelled these approaches while being guided by the PDS model in supporting PSTs and their use of LLLs established on campuses and in schools in the UAE. This research is expected to benefit the ongoing mutual collaboration among MSTs, college instructors, ECE PSTs, and their MCTs. Examination of these aspects of the PDS model within the teaching education of the UAE may help better define the factors that predict success for new teachers.

2. Literature Review

2.1 Language and Literacy Teaching and Assessment Strategies

Several strategies are adopted to enhance language and literacy teaching among preschoolers, including code-focused strategies, language enhancement interventions, and reading techniques. Reading is proposed as one strategy that builds children's vocabulary; therefore, teachers' comments during reading sessions can further augment their language and reading skills (Barnes & Dickinson, 2017). Regarding language assessment, Lam (2015) observed that language teachers from Hong Kong were hindered in their assessment of language and literacy because of under-preparedness due to inadequate training, which is exacerbated by the use of traditional standardized tests. Notably, Xu et al. (2014) found that both summative and formative assessment methods were crucial in teachers' planning of language lessons. Assessment becomes more critical at the kindergarten level, as literacy serves as the foundation of future reading skills.

When executed effectively, language and literacy teaching and assessment strategies are effective in enhancing students' acquisition of valuable skills. These skills relate to alphabet knowledge, phonological awareness, rapid automatic naming, writing, and phonological memory, among other skills. In their study of 220 Estonian-speaking primary school learners, Kasper et al. (2018) established that prioritizing strategies that develop reading interests is useful for reading and vocabulary acquisition. Moreover, in a preschool setting in the United States, Davison and Qi (2017) observed that shared book reading and intentional exposure to vocabulary in context were useful for preschoolers, especially those keen on second language acquisition. Focusing on teaching strategies that might enhance the acquisition of communication skills among preschoolers is important. Therefore, any additional assistance, such as the use of visual pictures to enable learners to form mental images of words or physical models paired with verbal commands to reinforce what is being taught, is crucial (Creger, 2019).

With the advancement in technology and contemporary ways of teaching and learning, international ECE programs are now utilizing modern language,

literacy, and assessment practices to meet the teaching and learning goals of PSTs. In a Hungarian experiment to enhance children's language acquisition, a PST engaged learners in play with sounds and invited them to guess the source of the sounds and to sing songs in the target language (Noel et al., 2019). These strategies mirrored arguments advanced by Creger (2019) on the use of play to enhance skills development among preschoolers. Translanguaging and bilingual aspects, for example, as well as the bilingual labeling of classroom displays, also work towards enhancing literacy acquisition (AlShamsi & Alsheikh, 2020; Bronteng, 2018).

2.2 Language and Literacy Laboratories

Establishing LLLs in schools that collaborate with university literacy and language programs has been one of the most creative and effective methods of preparing teacher candidates for the classroom (Maxwell et al., 2018). Notably, many PSTs struggle to formulate well-articulated learning goals and face difficulty in lesson planning and making assessment schemes for their students (Cavanagh et al., 2019). This supports the need for high-quality learning for PSTs, especially in literacy and special needs (Al Otaiba et al., 2012). Effective partnerships between schools and colleges can create a productive teaching and learning environment for PSTs and enhance current IST practices. These partnerships are intended to create opportunity for quality TP experiences.

Haverback and Parault (2011) maintained that field and laboratory settings impacted PSTs' beliefs and perceptions of students with different needs, learning styles, reading skills, and strategies. Moreover, the laboratory experience is strongly linked with PSTs' fieldwork experience while in TP. PSTs and MCTs can experiment and test hypotheses in literacy laboratories. More recently, researchers have started investigating the effectiveness of teacher development programs and strategies to produce high-quality teachers who can better align learning goals with quality standards (Elmahdi & Fawzi, 2019). Similarly, research has indicated that PSTs' performance and readiness levels could be enhanced by exposing them to real-life contextualized training with supervised clinical experiences (Marttinen et al., 2020). Therefore, to have trained and ready PSTs, an authentic learning context with clinical or laboratory experience is critical for teacher education programs (Sandoval-Lucero et al., 2011). Furthermore, PSTs must have additional experiences to develop expertise (El-Abd & Chaaban, 2020).

Wilson and Thayalan (2007) observed that language laboratories provide a platform to assess students' speech. These laboratories allow students to listen to the model pronunciation, repeat and record various sounds, listen to their performance, compare it with the available models, and conduct self-assessments. The authors emphasized that providing PSTs with this work experience allows them to gain a good command of the language for communication with clarity and accuracy. Maxwell et al. (2018) suggested that providing student teachers with laboratory field experience will assist them to practice evaluating students, analyzing the results, and developing assessment-based reading lessons based on individual needs. The PDS model is proposed to guide laboratory experiences to

provide an authentic learning experience that can benefit all education stakeholders in the UAE.

3. Methodology

3.1 Research Design

This study employed a pragmatism-driven sequential mixed-methods research design. The study was conducted during two semesters in the 2021–2022 academic year and consisted of two research approaches conducted in two phases. The findings of the first, quantitative phase were used to inform the second, qualitative phase (Creswell & Clark, 2011; Saunders et al., 2016), as it was perceived that one technique alone could not adequately respond to the current inquiry. In the quantitative phase, two self-administered survey questionnaires were distributed to the target population of PSTs and ISTs, and the collected data were descriptively analyzed. For the second, qualitative phase, focus-group interviews were conducted with PSTs and ISTs who were recruited from the first phase, MCTs, and other ECE instructors. The qualitative data were thematically analyzed. The criteria for inclusion in the quantitative phase were: a) current enrollment in an ECE program and b) willingness to volunteer. The criteria for exclusion were: a) absent persons (on study leave, maternity leave, etc.) and b) unwillingness to volunteer. Of the 1000 survey questionnaires distributed in Phase 1, a total of 720 PSTs and ISTs ($n = 352$ and 370 , respectively) responded, representing a collective response rate of 72%. PST respondents were between the ages of 18 and 23 years, whereas IST respondents were between the ages of 26 and 55 years.

3.2 Participants

The final list of respondents in Phase 1 consisted of registered PSTs and ISTs. In this group, all respondents were female, because the ECE field in the UAE is dominated by female instructors. Participants for the qualitative stage (Phase 2) were recruited from Phase 1, with the sample consisting of 42 participants (female PSTs, $n = 17$; female ISTs, $n = 15$; MCTs, $n = 6$ females and $n = 4$ males). The inclusion of participants from Phase 1 in Phase 2 satisfied the integrative nature of the mixed-methods approach.

3.3 Sampling

In the quantitative stage, all respondents were recruited via simple random sampling (Bryman, 2012) using a master list solicited from the federal HEIs and the Ministry of Education (MOE). This sampling procedure was used to ensure that each member of the targeted population had an equal and independent chance for selection.

For Phase 2, a purposive sampling technique was used to recruit participants from the quantitative phase. According to Creswell and Clark (2011), “[p]urposive sampling in qualitative research means that researchers intentionally select or recruit participants who have experienced the central phenomenon or the key concept being explored in the study” (p. 174).

3.4 Ethical Considerations

The study followed the principles of voluntariness and involved minimal risk. The MOE and HEIs approved the study. The survey questionnaire was anonymized to protect participant privacy and distributed to the target groups after receiving their informed consent. The focus-group interviews were conducted via Zoom over three weeks, and permission was sought and received from participants to record the sessions.

3.5 Data Collection and Analysis

3.5.1 Phase 1: Quantitative phase

We developed questionnaires from a pool of items compiled from previous literature on ECE language and literacy-related studies and laboratory experience in higher education. The questionnaires were compiled in English, and data were gathered during the 2021–2022 school year. The survey responses comprised the main data source; however, focus-group interviews expanded on the closed-ended questionnaire, thus enabling triangulation of the data.

3.5.2 Pilot testing

Before dissemination, the survey was sent to six educators from HEIs, faculty, and heads of faculties in schools, and amendments were made based on their feedback. The instrument was then pilot tested with 10 students in the first researcher's class and five ISTs. The students and ISTs indicated that some of the questions relating to the teaching and assessment strategies were repetitive, and these were subsequently revised.

3.5.3 Perspectives of ECE stakeholders of LLLs

The 133 items of the survey were based on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The survey was composed of six sections: *demographics* (e.g., sex, length of teaching tenure, and school classification); *language and literacy teaching and assessment strategies* (e.g., acquisition of teaching skills and program support); *teaching strategies* (e.g., planning skills and content knowledge); *assessment strategies* (e.g., using assessment tools such as the phonological awareness inventory); *effectiveness of language and literacy strategies* (e.g., for vocabulary building and slow learners); and *new global language, literacy, and assessment practices* (e.g., practical exercises in the teaching of reading, writing, and alphabet knowledge). The survey required approximately 20 minutes to complete. Descriptive analyses were conducted to obtain frequencies, means, and standard deviations. There were no incomplete questionnaires.

3.5.4 Phase 2: Qualitative phase

We developed the interview protocol and formulated 12 questions. Part A included three general questions about the experience in the ECE field. Part B included nine questions about the importance of LLLs in teacher preparation programs, their components, the manner of implementation, their importance in preparing PSTs for teaching literacy, their importance for the community, their goals, and their proposal for development. The protocol was sent to three faculty members and four students from the first author's class, and some questions were revised based on their feedback. All interviews were conducted via Zoom in

English over three weeks and were recorded and transcribed by the research team. By the end of the study period, participants were repeating the same information, thus confirming that data saturation had been reached (Creswell & Clark, 2011). We supplemented the electronic data with written field notes during the TP visits. Participants were issued pseudonyms due to ethical considerations. The data were thematically analyzed using NVivo 12 software following Braun and Clarke's (2006) six-step approach. We then sent our findings to members of the research group and ISTs to allow them an opportunity to validate our transcription. Engaging our participants in member-checking also served as an important aspect of triangulation (Candela, 2019). Table 1 presents the phases of the thematic analysis of perspectives of ECE stakeholders of LLLs.

Table 1: Phases of the thematic analysis of the perspectives of ECE stakeholders of LLLs

| Phase | Description of the process |
|------------------------------------|--|
| 1. Becoming familiar with the data | We transcribed, read, and re-read the data and noted initial ideas |
| 2. Generating initial codes | We systematically coded interesting features of the data and collated data relevant to each code, for example, <i>experience</i> , <i>resource type</i> , and <i>camaraderie</i> |
| 3. Searching for themes | We collated data into potential themes and gathered all data relevant to each potential theme |
| 4. Reviewing themes | We checked if themes worked with the coded extracts (Level 1) and the entire data set (Level 2). We generated a thematic map of our analysis. |
| 5. Defining and naming themes | We performed an ongoing analysis to refine the specifics of each theme. An overall story began to emerge, after which we generated clear definitions and names for each theme. |
| 6. Analyzing the results | We selected vivid, compelling extracts as examples. We created a final analysis of the selected extracts and related this analysis to the research questions and secondary literature. |

4. Results

4.1 Descriptive Data from Survey Results

Of the 720 respondents who responded to the survey, all were female (100%). Approximately 70% taught in public schools and 30% taught in private schools. Furthermore, 60% had taught ECE for more than five years. For 80% of the respondents, the highest level of qualification was a BA in Education/ECE, and 20% had an M.Ed qualification.

4.1.1 Stakeholder perceptions of training

Most respondents (53%) agreed with the extent to which training on language and literacy teaching and assessment strategies was provided ($M = 4.11$, $SD = 0.78$).

4.1.2 Stakeholder perceptions of language and literacy teaching strategies currently implemented

Most respondents (55%) appeared confident about their knowledge of children, their knowledge of and ability to teach the content, and their ability to modify the content to suit the situation even if it involved information and communication technology ($M = 4.16$, $SD = 0.75$).

4.1.3 Stakeholder perceptions of language and literacy assessment strategies

Most respondents (58%) felt confident using and applying assessment strategies to provide feedback to their students and intuitively assess their needs ($M = 4.17$, $SD = 0.72$).

4.1.4 Stakeholder perceptions of new global language, literacy, and assessment practices

Most respondents (57%; $M = 4.15$) agreed that students' literacy performance reflected the effectiveness of the strategies implemented in early childhood educators' training, teaching, and assessment. Specific categories under this heading (and their respective scores) are literacy (57%; $M = 4.18$), print (50%; $M = 4.18$), comprehension/vocabulary (54%; $M = 4.26$), alphabet knowledge and letter-pronunciation practices (50%; $M = 4.30$), phonological awareness activities (53%; $M = 4.24$), reading-aloud practices (52%; $M = 4.26$), and writing activities (53%; $M = 4.28$).

Respondents agreed that the training included in the ECE teacher preparation program is crucial in implementing effective language, literacy, and assessment teaching strategies. In addition, they agreed that the current implemented strategies and new global language, literacy, and assessment practices are essential and should be emphasized to enhance current practices.

4.2 Qualitative Analysis

Three general themes were identified as they pertain to the research objectives of this study. In the focus-group sessions, participants reflected on the processes that occurred during TP and aligned this with what they learned in the classroom. One key theme was how this experience strengthened their confidence in their competence and willingness to continue their ECE career. The results are presented using the pseudonyms assigned to participants.

4.2.1 Experiences in the ECE program

Participants identified learning new concepts in the ECE program, which consisted of awareness of language, morphology, syntax, and phonology. One IST reported that:

"The ECE program helped us understand and practice authentic teaching through theoretical and practical courses that raised our awareness of various language aspects and the teaching and assessment strategies to improve them. I remember Miss Susan taught us about linguistic awareness and the strategies that should be employed in the classroom. For example, I learned about the literacy inventory and how to apply it to measure my children's literacy readiness." (Alya)

MCTs observed that they enjoyed working with PSTs. Such comments highlighted the collaborative nature of the engagement and objective of the PDS model.

"I enjoyed teaching. I enjoyed watching my pre-service teachers teaching young children and applying what we teach them in the classroom. I feel proud of them when I see the latest literature-supported best practices applied in ECE classrooms. Also, we teach them how to contextualize practices that are unique to this country." (Kyle)

The role of the PDS model in the bilingual context was also highlighted.

"I like how ECE programs are structured. We teach our pre-service teachers to integrate subjects through play and improve literacy and biliteracy through strategies such as translanguaging and code-switching. We teach them to apply strategies that support reading skills such as the big books, storytelling, and many other strategies." (May)

PSTs added that overseas teachers were beneficial as they helped them fulfill their duties as ECE interns. One PST stated that:

"... for me, it was a huge benefit. My mentor teacher was absolutely phenomenal, and we worked very well together and we're still in contact. Her guidance was beneficial and helped to develop my confidence to teach and lead a classroom. It wasn't easy for her to teach children whose English is not their first language, but with the support of her co-teacher, she was able to implement her best practice and help me apply learned strategies." (Salma)

4.2.2 Implementation of LLLs

MCTs shared how LLLs with the appropriate resources could be useful for bilingual students.

"I would envision [LLLs] as having a space where you have all the resources that you need to teach all subjects with a linguistic focus. You have the children there that you can teach, with pre-service teachers learning how to do actual research [and] they're learning how to collect data and use that data to push children forward. I can see a language lab as a place where math and science activities are integrated to support concept development with an authentic link to enable literacy development among children, and reflection." (Talia)

ISTs also added that LLLs led to improvement in practice and school teaching, specifically language practice through activities that included the use of technological aids.

"My main goal as a KG (kindergarten) teacher is to apply a strategy or a teaching methodology that enhances children's literacy in English and Arabic within an integrative teaching and learning environment. I imagine having a pre-service teacher who gathers and analyzes data, so we can think about how to improve our children's linguistic abilities. I respect the reflective practices many of my pre-service teachers apply." (Talia)

An analysis of the HEI instructors' views on how LLLs support students showed results with more accurate assessments. LLLs also led to confidence in literacy assessment, inquiry-based learning, and cognitive skills. One MST observed that:

"I think you can't start anywhere without getting a background of where the students are at, I mean hands-on games, hands-on materials inside of literacy, that's very important, but before we get there, we need to know where the students are at, so accurate assessment would be one of my top priorities in a literacy lab." (Salwa)

One PST mentioned inadequate resources for implementation, which included programs and specific equipment.

"The resources – what's lacking is the implementation, yeah, the practical part. We need a space where we can bring children on campus, apply a uniquely designed literacy program for the community children, assess the progress, and finalize it with research. Having PSTs actually implement what they're seeing and understanding how to implement what they're doing is challenging sometimes. We want to apply all listening, speaking, reading, and writing activities with young children at our campus, where we can assess them and provide strategic guidance and support." (Sara)

One MCT also noted that:

"You need a good comprehensive phonic program because it's a good starting point. In the school, teachers don't need to have the phonics program; they're moving children through the system." (Gillian)

Participants shared that LLLs aim for unprompted engagement with resources, which could be a motivational factor. One MCT noted that:

"The LLLs provide unexpected engagement with the different resources. It really motivates students right when they are unprompted." (Jane)

4.2.3 Effectiveness of literacy strategies

One of the PSTs indicated that they are prepared as future teachers through advanced teaching strategies using technology and new hybrid spaces via LLLs.

"These labs provide children with a rich interactive learning environment. Children are supported by technology and physical guidance, where teachers can scaffold and guide their progress. They can support children to work independently and evaluate their progress." (May)

Participants also indicated that LLLs are crucial in providing inquiry-based learning, practical learning experiences, rich learning strategies, a semiotic system, and teaching through drama.

"Everything we do with children starts with a question and then they start thinking about how or where they want to go with the idea." (Gillian)

"LLLs are important hubs for children to practice language through activities, audio, video, visuals, etc." (Aysha)

"LLs provide rich teaching, learning, and assessment strategies, especially when working on drama lessons." (Alyazia)

"... it is basically teaching children how to deal with language better to make their ways through the language. You have some kind of semiotic system, official language to transfer meaning to students and students construct meaning." (Tony)

Participating PSTs, ISTs, and MCTs mentioned that their teaching methods changed and had a positive effect on their students' literacy achievements. In addition, the confidence of students improved. LLLs prepared students as future teachers when they used learning tools to teach. One PST observed that:

"We have moved toward the integrative method in teaching and learning. And as you said before, literacy is everywhere – in math, you're writing; in science, we learn how to link English and Arabic subjects to facilitate science concepts and learning. We teach children how to speak and write in all classes. Labs would help us measure the effectiveness of any kind of implementation strategically and systematically." (Najla)

ISTs mentioned that LLLs provided practical orientation for students. One noted that:

"Some of the schools [I taught at] don't care about or know how to implement shared reading. They are not doing it. Others don't even have literacy or reading and writing programs at their schools. It depends on the school's leadership. Having a consistent practice of LLLs that are based on campus and support schools' practices is highly needed." (Alia)

HEI instructors highlighted the importance of setting clear goals and visions.

"We want a transformational curriculum implementation where an integrative approach is implemented through technology and data-based practices. Many leading education systems applied this transformational aspect of the curriculum to ensure that data leads to practice. We need this critical stance and the power to create this collaboration between HEIs' labs and schools to ensure guided best-practice implementation." (Ama)

"LLs are important aspects of the community. LLLs can be initiated as independent centers or in partnerships with colleges as evening programs. This will help children not only to learn but to have fun. It is a good opportunity to support parents. It is crucial to have community-based partnerships." (Nikishia)

5. Discussion

This study used a mixed-methods approach to investigate the perspectives of key stakeholders in ECE on LLLs in the UAE. The ensuing discussion contextualizes the findings of the results and triangulates them with the secondary literature.

5.1 Diverse Strategies in Language Learning Acquisition and Implementation

Most participating PSTs and ISTs expressed comfort in employing diverse strategies in ECE learning, such as literacy, print, vocabulary, and phonological awareness, and understood their importance. Our results support those of Kasper et al. (2018), who argued that language and literacy strategies enhanced the acquisition of learners' language skills. Barnes and Dickinson (2017) and Davison and Qi (2017) also concurred that knowledge of these activities strengthened students' communication skills, so PSTs and ISTs need to know how to implement them.

Participants expressed how their experiences in the ECE program integrated the theoretical aspects of their learning activities with practical strategies. This acknowledgment helped increase their competence and self-efficacy, and most expressed confidence in their ability to develop children's linguistic abilities, such as phonology, morphology, and syntax. The ability to master these activities and to perceive how they would be helpful in their teaching careers was evident in the responses. For example, most participants acknowledged the benefits of the pronunciation aspects of languages with the use of LLLs (Wilson & Thayalan, 2007). As highlighted by the Western ECE teachers, the provision of bilingual co-teachers for different activities in teaching and assessment in the early years could benefit young learners. Indeed, collaboration with foreign teachers was helpful and enriched the program, as it enabled the implementation of bilingual teaching strategies such as translanguaging and code-switching. Maxwell et al. (2018) observed that collaboration among the relevant stakeholders, such as universities and schools, or even among the teachers, was one of the highlights of LLLs and the PDS programs.

Factors related to well-structured integrative lessons were also highlighted. Demonstrating the associations during the lessons helped learners avoid confusion about the different learning concepts. Consequently, they were motivated to learn and gain more knowledge and practice, especially when concepts and literacy were emphasized in all subjects (Davison & Qi, 2017). Moreover, while focusing on teaching strategies that might enhance the acquisition of communication skills and development among preschoolers, Creger (2019) suggested the use of visual cues to reinforce what was being taught, among other strategies.

5.2 Language Learning, Literacy, and PDS Programs

Participating PSTs and ISTs found that their TP extended beyond the theoretical components, as they had the chance to apply them in schools and campuses through physical and digital spaces (Quirke & AlShamsi, 2023). However, there was a need for a consistent and sustainable practice that links HEI programs and schools through LLLs to apply the different strategies taught. Language and literacy programs engender a practical perspective on learning where learners are offered the opportunity to demonstrate what they are learning rather than just gaining theoretical knowledge (Maxwell et al., 2018; Pianta et al., 2016). Furthermore, the PDS model, which anchored this study, focuses on infusing learners with practical skills, thereby enabling them to be knowledgeable and

practical (Sandoval-Lucero et al., 2011). Generally, the findings show that participants had an enriching experience at the HEI, with language and literacy classes that were supported by the campus-school LLLs. Most participants considered it an opportunity to create partnerships with the community to enhance learners' language and literacy skills.

5.3 Implementation of LLLs

LLLs were considered useful for assessments in ways that could enhance the diversity of learning among ECE learners through inquiry-based learning (AlShamsi, 2022, 2023). Language assessments are challenging areas for teachers as they often rely on traditional approaches that may not be pragmatic. In this regard, Lam (2015) noted that teachers of language are often challenged in performing assessments due to the use of traditional approaches and a lack of understanding of their implementation. This suggests that using LLLs is a practical approach to language assessments. The results show how LLLs were also found to be instrumental in enhancing reading habits. One of the challenges as far as language and literacy are concerned is gaining reading skills and related concepts, such as vocabulary acquisition. However, when these laboratories are utilized and backed by appropriate strategies, learners make immense gains (Barnes & Dickinson, 2017).

LLLs would be useful in solving inquiry- and problem-based aspects of learning (AlShamsi, 2022, 2023) and for the development of cognitive and metacognitive abilities in young children (AlShamsi, 2021). For example, when the LLLs are embedded within the lessons, practical learning is enabled. This observation is supported by researchers such as Maxwell et al. (2018), who noted the practical components of LLLs. This aspect supports the focus of PDS models on supporting this level of learning (Ball & Cohen, 1999). Therefore, using LLLs encourages practical learning and fits well within the PDS model (Sandoval-Lucero et al., 2011).

6. Conclusions

Education stakeholders' perspectives on LLLs in ECE programs are important for ensuring competency and efficacy in language teaching and learning in countries such as the UAE. The PDS model is unique in that it allows a form of collaborative immersion between institutions, known for theory, and teacher educators, known for practicum, without barriers or other impediments. This meaningful association between theory and practice is perceived to benefit early learners of language and literacy. This study showed strong support for the PDS model as proposed by the Holmes Group. PSTs and ISTs welcomed the opportunity to engage with and learn from the MCTs and other instructors in the UAE education system, who in turn admitted that they also enjoyed imparting knowledge and engaging with their mentees. The strength of the field experiences in predicting the teacher trainees' readiness was apparent. Their competence and efficacy will remain buoyant if they are placed in under-resourced schools or schools with lackluster leadership, which will be important when assessing the sustainability of activities and the training provided in PDS programs.

The outcome of the study highlights the important role played by mentor teachers in the preparation process and suggests the need for more long-term support even when PSTs and ISTs are placed in their respective schools. To this end, careful selection and training of new entrants will be important as the profession and the current state of education require creativity and foresight to address the limitations that may arise after these teachers become full-fledged instructors. All teachers will need to apply unconventional methods to accommodate socioeconomic, psychological, and cultural diversity when faced with real-world challenges. LLLs are best practiced in partnership with schools, HEIs, and the community.

7. Recommendations

Several recommendations emanate from this research. First, teachers can develop learning hubs for the learners in their respective schools in partnerships with HEIs to enable them to learn through activity-based curricular episodes. Simulations could be of immense value in this regard, as the dramatic presentations of language teaching and learning involve all human senses and can improve children's higher order thinking skills. Participants noted that the learners' oral skills were employed more frequently, so there was a greater need to develop their reading habits. Incorporating technology into the teaching and learning of language would be a valuable addition to enable learning in hybrid spaces.

Second, participants expressed a desire for subject-specific assessment techniques or strategies for language teaching assessment. Therefore, on-task or in-the-laboratory assessment through projects and assignments at the individual and group levels might be useful. This can take the form of in-class and out-of-class activities. This aligns with the PDS model, which advocates for a practical approach to language and literacy teaching in schools.

Third, students have different personalities, so it is recommended that teachers adopt different approaches to accommodate these differences and cater to individual needs. Instructors need to devise unconventional strategies to enhance learners' literacy skills and ensure a congenial learning environment.

8. References

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