

Evaluation of Challenges Faced by the Early Childhood Care and Education due to the Shortage of Teachers in Punjab, Pakistan

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Affiliations ¹Doctor of Philosophy (Ph.D.) Education, The Islamia University of Bahawalpur  https://orcid.org/0009-0002-4853-045X	Abstract Early Childhood Care and Education (ECCE) is essential in developing young children's fundamental cognitive and social-emotional skills. This research examines the difficulties encountered by early ECCE in Punjab, Pakistan, specifically highlighting teacher shortages, insufficient teacher training, and the underutilization of available resources. Using a mixed-method approach, data were collected from 40 ECCE schools in Bahawalnagar District. Data were collected quantitatively from the School Information System (SIS), and qualitative data were gathered through interviews from caretakers of ECCE rooms and classroom observations. Research indicates a severe teacher shortage in Punjab, where 107,372 teaching positions are unfilled, with 3,984 vacancies concentrated in Bahawalnagar. More than 95% of ECCE teachers and caregivers are deficient in essential skills; conversely, over 50% of educational institutions cannot utilize ECCE kits to their full potential due to insufficient training. Overcrowding is widespread, with approximately 70% of schools combining ECCE, Playgroup, and Nursery classes under a single caretaker, ultimately compromising educational standards. The situation delivers fewer results because government policies fail and organizations waste available resources. The research recommends filling the vacant posts of teachers, launch teachers' trainings programs with ECCE. By addressing the challenges ECCE will be fruitful for ECCE learners. Keywords: Early Childhood Care and Education (ECCE), ECCE Challenges, Shortage of Teachers, ECE Punjab, School Education Department Punjab	
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Introduction

Early Childhood Care and Education (ECCE) is increasingly recognized as a foundational platform for lifelong learning and development. Our research shows that effective ECCE programs enable children to develop better primary school readiness while boosting their literacy and mathematics skills, resulting in superior educational success throughout life. To upgrade quality ECCE facilities across Punjab districts, PHCIP's Bunyad program renovates 3,400 institutions in 11 districts throughout Pakistan. Effective ECCE programs are linked to enhanced school readiness, improved literacy and mathematics skills, and greater overall educational success (StayHub, 2022). However, despite this acknowledged importance and ongoing reforms, ECCE in Pakistan, particularly in Punjab province, faces persistent and multifaceted challenges. These include inadequate resources, insufficient numbers of trained teachers, and systemic barriers that impede access to high-quality early learning experiences (Ahmad et al., 2019; Artipah et al., 2024; Malik & Asghar, 2021; Rafiq et al., 2023).

The teacher workforce represents a critical component of ECCE quality, and its deficiencies are particularly acute in Punjab. Studies have highlighted low salaries, limited opportunities for professional development, and a lack of professional recognition as contributing factors to decreased teacher motivation and commitment (Rafiq et al., 2023). Moreover, systemic issues such as poverty, limited parental awareness of the importance of ECCE, and weakened policy structures further compound the problem (Arshad & Zamir, 2018).

The Punjab Human Capital Investment Project's (PHCIP), through its Bunyad initiative, works to overcome obstacles by developing high-quality early childhood and childhood educational resources for children between the ages of 3 and 5 years, particularly those from economically

disadvantaged families. The foundation learns within Bunyad, trains participants about essential educational targets, and educates community population members about safety protocols for children's sex equality programs and climate protection guidelines. The achievements of Bunyad, together with other programs, depend on overcoming persistent teacher shortages that currently inhibit goal achievement. Access to quality early childhood educational experiences remains a significant difficulty for developing countries pursuing equal educational provisions throughout their territories. A lack of quality education access coupled with a dearth of qualified instructors stall progress in Pakistan, but technology adoption appears to solve these problems, as reported by Artipah et al. (2024). Early learning programs in the Philippines have strong legislative backing, but the adoption of these programs continues to be hindered by financial constraints and difficulties with infrastructure, service delivery, and equal opportunity availability (Bustos-Orosa, 2021). Despite achieving enrollment growth in primary education in Ethiopia, the education program faces intense access and quality problems in Early Childhood Care and Education programs throughout rural settings (Orkin et al., 2012). Woodhead et al. (2009) demonstrate that Ethiopia, India, and Peru share similar obstacles in developing their equity frameworks and establishing defined policies and quality bars and workforce competencies and motivation standards. Government investment, partnerships, and specific interventions should continue to address ECCE challenges that block the full realization of program potential to transform young lives. This mirrors a broader global trend, where developing nations often struggle to provide equitable access to high-quality ECCE due to financial constraints, infrastructure limitations, and difficulties in service delivery (Bustos-Orosa, 2021; Orkin et al., 2012; Woodhead et al., 2009).

Beyond resource limitations, deeper systemic issues impede ECCE effectiveness. Ansari et al. (2024) found leadership and governance

issues affecting resource management, data utilization, and workforce motivation across Punjab's ECCE sector. These challenges necessitate a multi-pronged approach, including increased government investment, strategic partnerships, and targeted interventions focused on teacher training, parent engagement, and data-driven planning (Ahmad et al., 2019; Arshad & Zamir, 2018; Artipah et al., 2024). Addressing these complexities requires not only increased funding but also a robust policy framework, well-trained educators, and active participation from all stakeholders (Arshad & Zamir, 2018; Ghulam Yasrab, 2022).

This study examines the challenges related to teacher availability and quality within Punjab's ECCE landscape, contextualized by the PHCIP's *Bunyad* initiative. Drawing on both global perspectives on ECCE challenges and local realities within Punjab (Fenech et al., 2009; Fredman et al., 2022; Hu et al., 2016; Iqbal et al., 2021; Kambona & Ndibalema, 2025; Qi & Melhuish, 2017; Simon et al., 2024), this research investigates teacher recruitment, training quality, and deployment strategies. The aim is to generate evidence-based recommendations for PHCIP stakeholders and policymakers to improve ECCE quality, enhance accessibility, and ensure that all children, regardless of socioeconomic background, have access to a strong foundation for future learning. The study contributes to a deeper understanding of the ECCE teacher workforce in a specific regional context, offering insights relevant to other developing countries facing similar challenges in expanding access to and improving the quality of early childhood education.

Tekin (2016) explores Omani pre-service teachers' attitudes toward bilingual early childhood education, noting support for its benefits, while acknowledging challenges and solutions. These studies collectively underscore the complexities in early childhood education, spanning issues of equity, teacher training, program implementation, financial models, and cultural contexts.

Early childhood care and education (ECCE) is a dynamic field shaped by the interplay of global influences and local contexts (Sumsion, 2019). ECCE policies and practices are increasingly impacted by international organizations and their circulating ideas, often leading to standardization, but also allowing for resistance and adaptation [Sumsion, 2019]. This complex interaction is especially apparent in the roles and challenges faced by early childhood special education teachers (ECSETs) and in the methods used to evaluate child outcomes within ECCE settings (Heiskanen et al., 2024; Masso et al., 2023). This article examines the global and local dimensions of ECCE, focusing on the influence of global policy imaginaries on ECCE, the multifaceted roles and challenges of ECSETs within inclusive ECEC, and the methods and resources required to effectively measure child outcomes (Heiskanen et al., 2024; Masso et al., 2023; Sumsion, 2019).

This analysis loopholes the teaching scarcity symptoms within Punjab's early childhood education area against the *Bunyad* initiative background. This research investigates teacher availability, training quality, and placement strategies to generate practical guidance for PHCIP stakeholders and policymakers. The research findings will enhance existing knowledge about ECCE quality development and accessibility improvements so every child from diverse economic circumstances can experience a solid educational start.

Methodology

This study was conducted in Punjab province of Pakistan. Under mixed method design, the quantitative data of allover Punjab was collected from the official website of School Information System (SIS) “sis.pesrp.edu.pk” and qualitative data via interview was

collected from Districts Bahawalnagar only due to less resources and access of all over Punjab and the researcher not be able to interview from all over Punjab. Quantitative data about teachers was collected from School Information System (SIS) and qualitative data from caretakers was collected through structured Interview guide and 2 hours spending in teaching of each ECCE class and engaging in activities with ECCE learners to observe their performance, achievements and actual face of ECCE in schools. 40 schools from all over district were selected randomly which have ECCE rooms and caretakers. According to the need of study, 22 questions based interview guide was used to collect data via interviews from

caretakers. The interview guide items were pre-analyzed by expert researchers and pilot interviews in two schools of Bahawalnagar to maintain its validity and reliability. The observation of ECCE learners was focused on “Age, Class, STR (Student Teacher Ratio), Classroom, Activities, Seating arrangement, Learners participation in learning and Caretaker delivery of Education and Caring. district. With the permission of head teachers, 40 caretakers of Early Childhood Care and Education (ECCE) Rooms were interviewed by the researcher that are fully engaged with ECCE learners by structured interview. The data was analyzed by Microsoft Excel and thematic analysis manually.

Data Analysis

Table 1. Post Summary of teachers in Province Punjab

POST	VACANT	FILLED	TOTAL
QARI / BANDMASTER	559	28	587
PST / ESE	62,594	166,770	229,364
EST / SESE	24,542	103,558	128,100
SST / SSE / DPE	7,678	44,556	52,234
SS / SSS	7,574	2,768	10,342
HM / PRINCIPAL	4,425	3,318	7,743
TOTAL	107,372	320,998	428,370
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School Information System of Punjab Government, sis.pesrp.edu.pk (15-09-2024)

Teaching Staff (By Designations)

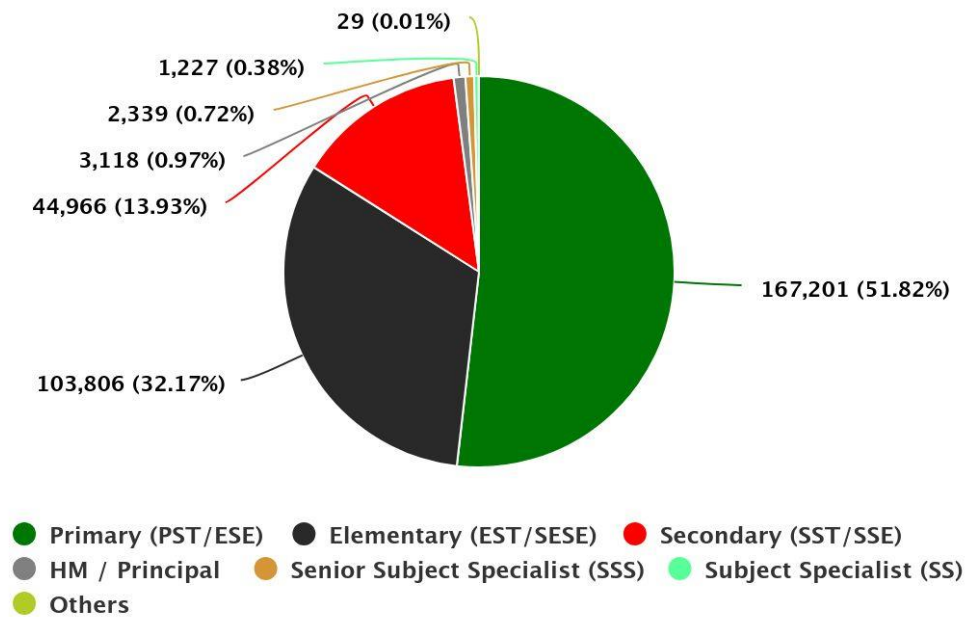


Figure 1. Graphical presentation of teaching staff by designations in Punjab Province (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).

Teaching Staff Education

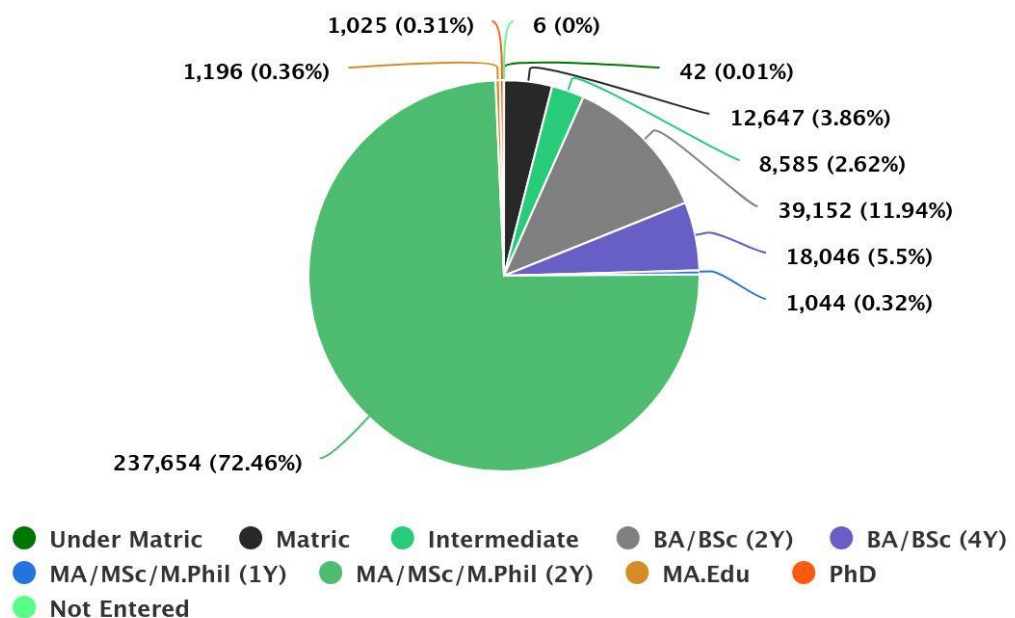


Figure 2. Graphical presentation of teaching staff by Education in Punjab Province (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).

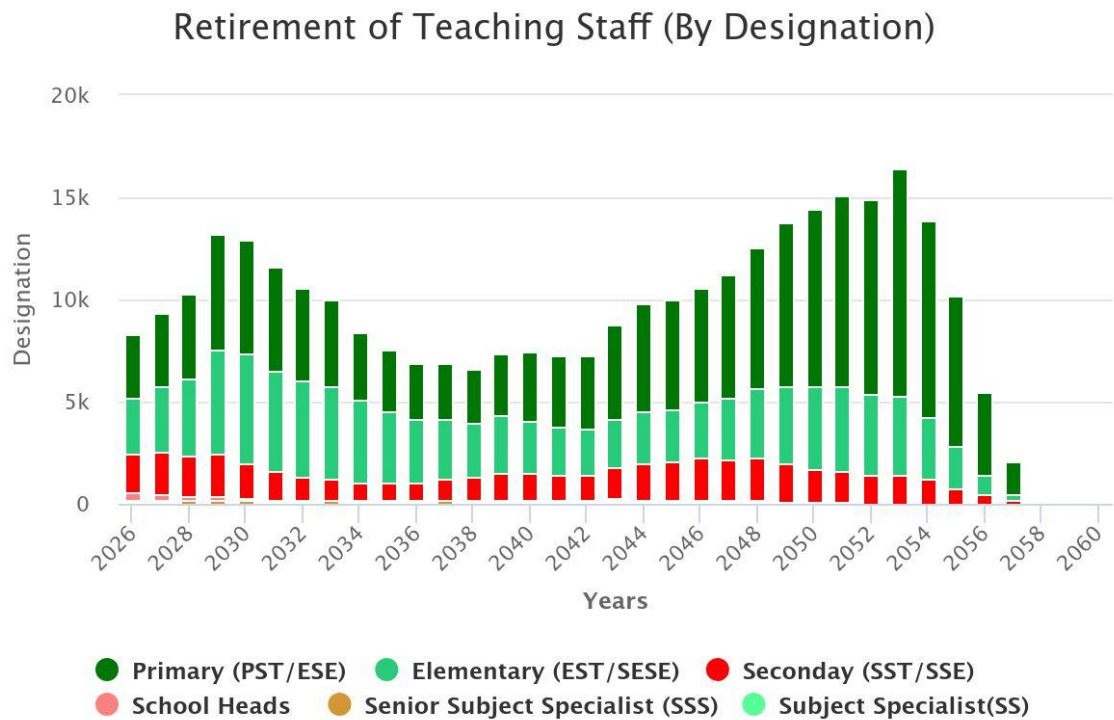


Figure 3. Graphical look of teaching staff retirement by designations in Punjab Province (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).

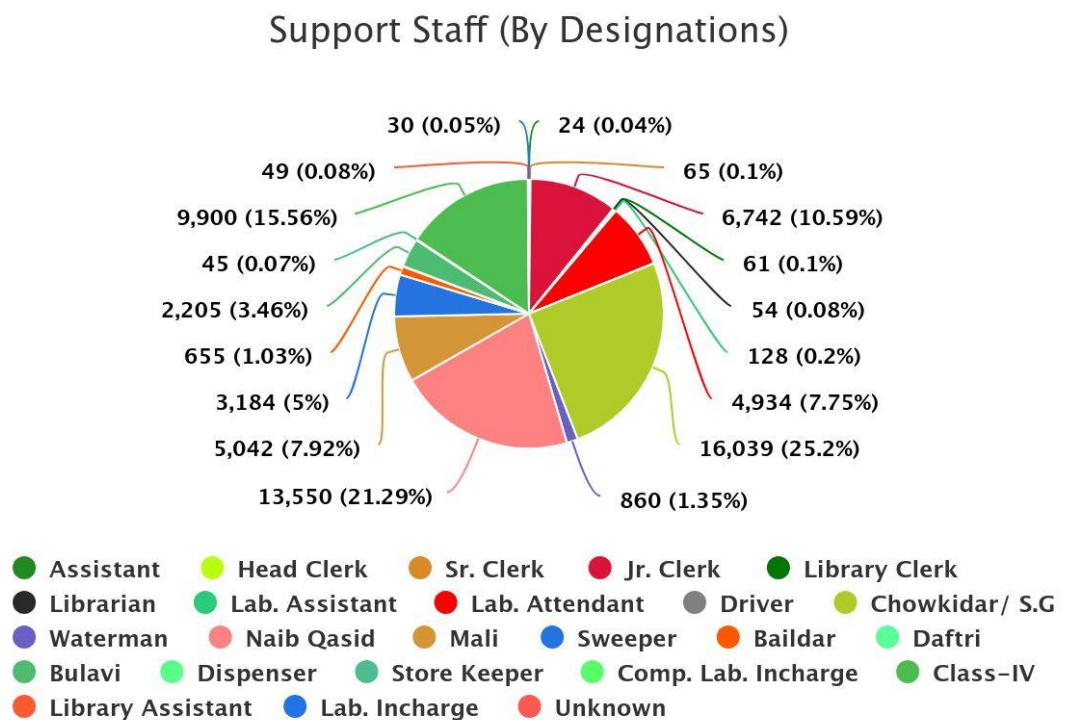


Figure 4. Graphical presentation of supporting staff in school education department of Punjab Province by designations (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).

Table 2. *Enrolled ECCE Students in Punjab Province*

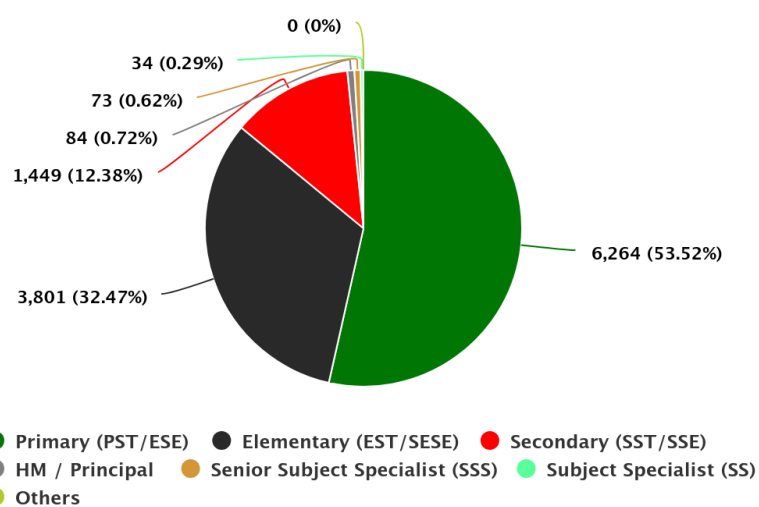
Sr. No.	Age in years	Enrolled in ECCE Class	Male	Female	Total
1	2	7963			
2	3	48564			
3	4	153042			
4	5	178250			
5	6	117239			
6	7	62853	314740	315526	630266
7	8	33126			
8	9	16660			
9	10	7676			
10	11	3333			
11	12	1560			

School Information System of Punjab Government, sis.pesrp.edu.pk (15-09-2024)

Table 3. *Post Summary of teachers in Bahawalnagar District of Punjab*

POST	VACANT	FILLED	TOTAL
QARI / BANDMASTER	2	0	2
PST / ESE	2,639	6,210	8,849
EST / SESE	791	3,774	4,565
SST / SSE / DPE	233	1,435	1,668
SS / SSS	181	68	249
HM / PRINCIPAL	138	78	216
TOTAL	3,984	11,565	15,549

School Information System of Punjab Government, sis.pesrp.edu.pk (15-09-2024)

Teaching Staff (By Designations)**Figure 5.** *Graphical presentation of teaching staff by designations in Bahawalnagar district (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).*

Teaching Staff Education

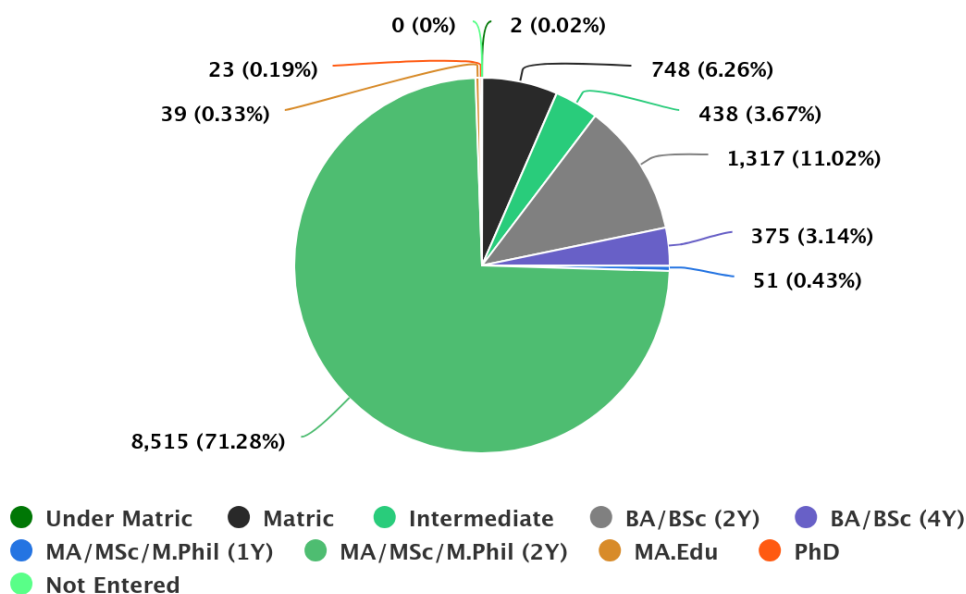


Figure 6. Graphical presentation of teachers' education Bahawalnagar district (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).

Retirement of Teaching Staff (By Designation)

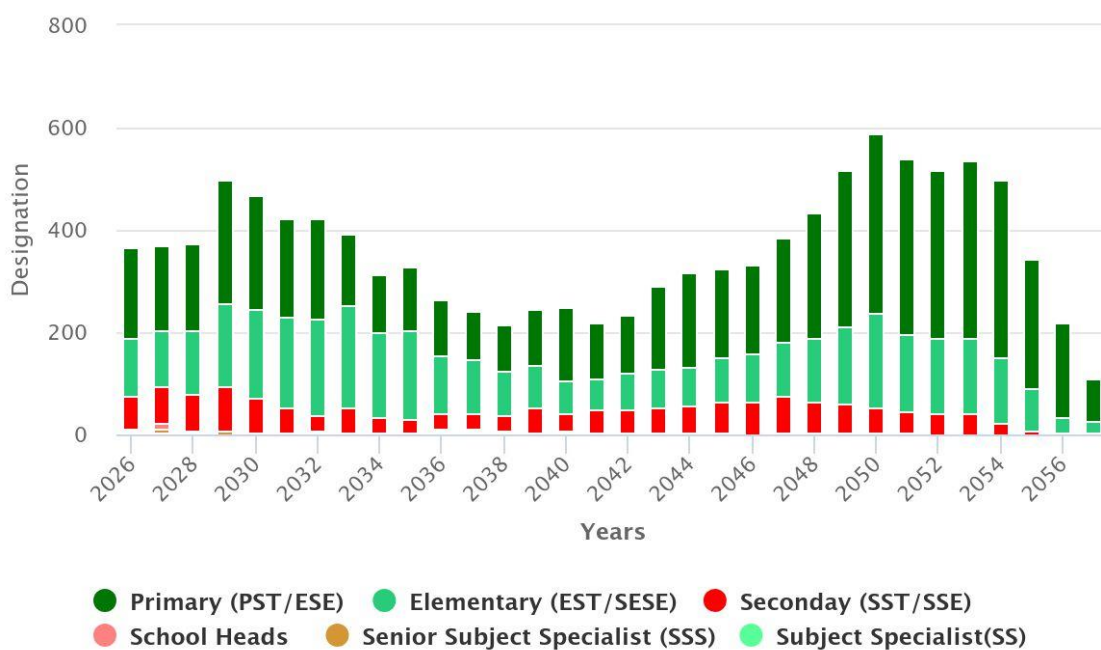


Figure 7. Graphical look of teaching staff retirement by designations in district Bahawalnagar (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).

Support Staff (By Designations)

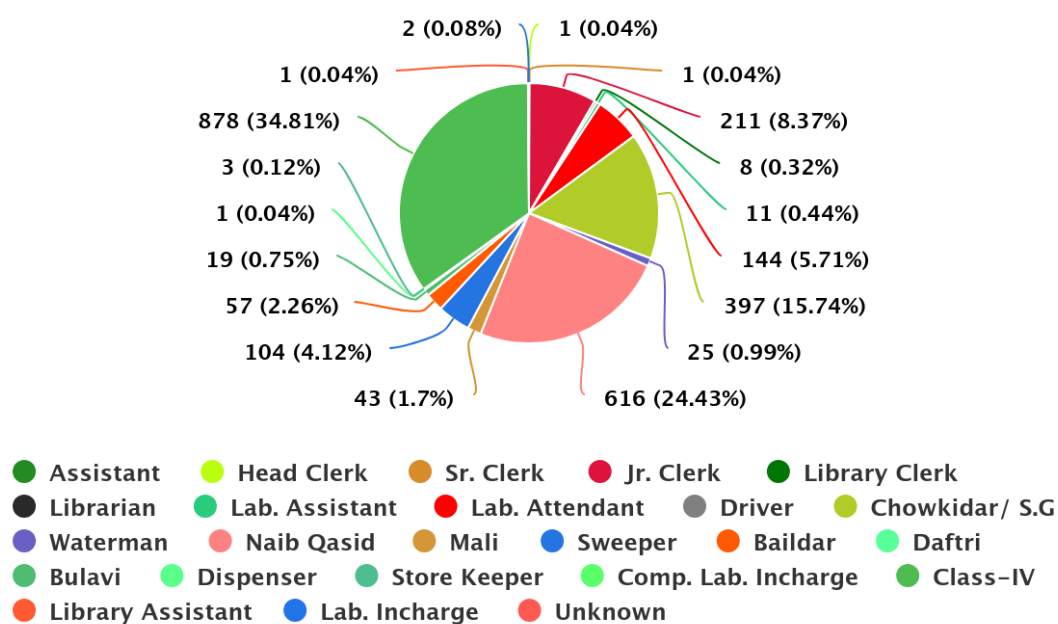


Figure 8. Graphical look of support staff by designations in Bahawalnagar district (School Information System of Punjab Government, sis.pesrp.edu.pk, September 15, 2024).

Table 4. Enrolled ECCE Students in Bahawalnagar District

Sr. No.	Age in years	Enrolled in ECCE Class	Male	Female	Total
1	2	373			
2	3	2397			
3	4	6757			
4	5	7894			
5	6	5306			
6	7	2602	15294	15414	27708
7	8	1314			
8	9	598			
9	10	287			
10	11	127			
11	12	53			

School Information System of Punjab Government, sis.pesrp.edu.pk (15-09-2024)

Table 5. *Summary of The Key Qualitative Findings from Structured Interviews of Respondents*

Theme	Key Findings from Structured Interviews
Overaged Children in ECCE	Caretakers reported that children aged 6–12 attend ECCE due to a lack of awareness among parents and absence of strict enrollment policies. Overaged children disturb the learning process for younger students.
Lack of Promotion & Learning Outcomes	No, ECCE learners were promoted to the next class due to poorly designed activities and ineffective learning strategies. Teachers confirmed that ECCE rooms function more as daycare spaces than structured learning environments.
Overcrowding & Teacher Shortage	70% of schools merged ECCE, Playgroup, and Nursery classes under one caretaker, leading to poor classroom management and compromised educational quality. Teachers expressed frustration over excessive workload.
Lack of Training & Ineffective Online Sessions	95% of teachers and caretakers lacked ECCE-specific training. Many head teachers delegated their online training responsibilities due to unfamiliarity with IT. Physical training was deemed ineffective due to its short duration.
Underutilization of ECCE Kits	More than 50% of teachers could not use ECCE kits due to lack of training, and some schools kept kits locked due to fear of damage. Caretakers stated they had no guidance on how to integrate the kits into lessons.
Merging of ECCE & Nursery Classes	Teachers reported that combined classes resulted in compromised learning outcomes, as one caretaker could not effectively manage multiple age groups. Learning objectives were lost due to time constraints and lack of resources.
Lack of Activities & Student Engagement	Most ECCE classrooms did not conduct activities due to time limitations and an absence of structured lesson plans. Teachers indicated that activity-based learning was not a priority in many schools.

Findings

107,372 out of 428,370 teaches posts were vacant in School Education Department of Punjab. It means one fourth (25.06%) of the teachers were short in Punjab. 3984 out of 15549 were short in Bahawalnagar district. The Early Childhood Care and Education (ECCE) classes, designated for children aged 3 to 5 years, were predominantly attended by overaged children. No ECCE learners were promoted to the next class after one year, primarily due to inadequate or poorly delivered activities, lack of proper education,

and a shortage of teachers. Overcrowding in ECCE classrooms indicated a lack of activities being conducted in the ECCE rooms.

More than 95% of head teachers, ECCE teachers, and caretakers were untrained and lacked essential skills related to ECCE. Some online training sessions conducted via mobile applications were seen as mere formalities and were met with disinterest. Often, head teachers delegated their online training responsibilities to others due to unfamiliarity with IT or Android technology. Physical

training sessions related to ECCE, conducted across Punjab, were ineffective due to their short duration. Furthermore, the trained teachers were not assigned to ECCE classes.

In many schools, ECCE classes were handled solely by caretakers, who were responsible for teaching, classroom management, and conducting activities, due to the acute shortage of teachers.

Over 70% of schools had merged Playgroup and Nursery classes with ECCE, with only one caretaker managing all groups. In 20% of schools, Playgroup, Nursery, and an additional class were combined with ECCE classes, compromising the essence and objectives of ECCE. No activities were conducted in ECCE rooms for learners, either due to teachers' inefficiency or the lack of adequate teaching staff.

More than 50% of schools did not utilize ECCE kits. The primary reasons for this included caretakers' lack of skills to use the kits, untrained teachers, or a shortage of staff. Teachers were neither engaged with ECCE classes nor trained in the effective use of ECCE kits.

Over 90% of ECCE classrooms were either misused or underutilized, failing to comply with ECCE guidelines and requirements due to shortage of teachers and untrained, unskilled ECCE teaching and caring staff.

Discussion

Teacher shortages and lack of proper training emerge as key difficulties facing Early Childhood Care and Education (ECCE) provision in Punjab, Pakistan. Punjab's School Information System (2025) reports 107,372 vacant teaching positions across the province, where primary school teachers (PST/ESE) maintain the highest number of unfulfilled positions at 62,594 (Table 1).

ECCE classrooms suffer from poor functionality because over 90% of ECCE rooms lag behind program standards through incorrect use and underutilization. Rafiq et al. (2023) verified teacher shortage problems and lack of staff involvement as significant factors that decrease ECCE program success.

Out of a total workforce of 15,549 positions in the District Bahawalnagar study area, the current vacancy rate amounts to 25% or 3,984 teacher posts (Table 3). ECCE classrooms become excessively crowded because more than 70 percent of schools force their Playgroup, nursery, and ECCE classes to share one caretaker due to staffing shortages. Bustos-Orosa's (2021) research in the Philippines shows that combining ECCE nursing services with other classroom activities deteriorates the overall goals of early childhood education.

Early childhood care and education learners do not achieve normal development because teachers lack specialized skills and have insufficient educational programs. Punjab training programs reveal severe deficiencies because more than 95% of ECCE school leaders, teachers, and caretakers receive no proper education training, including physical attendance and online sessions. Policymakers should focus on training quality because it emerges as an essential factor influencing early childhood education outcomes, according to Ansari et al. (2024). The utilization rate for ECCE kits was low because caretakers at more than 50% of schools lacked essential skills, according to the School Information System (2025). According to Artipah et al. (2024), the effectiveness of ECCE quality remains unaffected when resources are available without planned training programs.

The enrollment data from Punjab reveals that 630,266 students receive ECCE compared to

an ideal division by age group (Table 2). An examination of enrolled children shows that most students were older than their actual age range, extending up to 12 years. Changes to this proper learning environment occur due to improper class distribution since younger students do not get appropriate cognitive and social-emotional developmental attention. Research by Woodhead et al. (2009) demonstrates that ECCE programs in Ethiopia, India, and Peru suffered reduced outcomes when children were not placed in age-relevant classrooms.

According to the School Information System database from 2025, ECCE classrooms across Punjab operate below capacity because more than ninety percent fail to meet ECCE guidelines due to an absence of qualified teaching staff. The data reveals systematic issues in resource management, which matches the findings of Malik and Asghar (2021) regarding ECCE programs throughout Pakistan.

Analysis suggests that the Punjab Human Capital Investment Project (PHCIP) succeeded in enhancing participation rates and raising public understanding of Early Childhood Education programs. The Bunyad component works to build advanced Early Childhood Education spaces that serve poor students. Research shows Ethiopia succeeds in delivering targeted educational infrastructure because it raises student participation rates and boosts retention numbers (Orkin et al., 2012). The total progress of these programs remains limited because schools continue to lack enough trained teachers.

Educator training programs plus developing and placing qualified teachers as well as properly distributing resources help us bridge these gaps. Punjab's ECCE framework uses established effective educational methods

from around the world to support Ghulam Yasrab's (2022) guidelines. When teachers are trained properly while policymakers follow their systems and stakeholders get involved more fully young children will flourish in education.

The qualitative research findings also support the quantitative data, highlighting a critical state in Punjab's early childhood care and education sector. According to the data, there are 107,372 vacant teacher positions (Table 1), resulting in a shortage of qualified staff in ECCE classrooms and leading to overcrowding, with more than 70% of schools having to share a single caretaker across multiple grades. The organizational failure, as evidenced by interviews, undermines the core objectives of ECCE. Studies show that a shortage of trained educators exists, which is consistent with the data from interviews, in which 95% of teachers and caretakers stated they had not received formal ECCE training. Furthermore, despite the introduction of government-led online training programs, interviews indicated that many head teachers either delegated responsibility for these sessions or ignored them because of IT-related issues. The underutilization of ECCE kits correlates directly with a gap in teacher preparedness, with over 50% of schools unable to effectively integrate these tools due to a shortage of practical guidance. A notable concern mentioned in interviews was the presence of children who are older than typical age ranges (6-12 years old) in early childhood education and care settings, as evidenced by enrollment information presented in Table 2. Teachers stated that many parents were unaware of the correct age-related categorizations, resulting in disruptions to class dynamics and impeding the cognitive growth of younger pupils. Interviews have revealed a correlation

between the absence of structured activities in ECCE classrooms and lower-than-expected promotion rates among ECCE students, as quantitatively demonstrated. Instructors recognized that early childhood classrooms and care environments (ECCE) operated primarily as childcare facilities rather than formal learning settings. The inability to implement an activity-based learning approach worsens the situation, since untrained caregivers lack the capacity to implement effective engagement strategies. The research underscores the pressing requirement for hiring more teachers, implementing professional development courses, and revising educational policies to guarantee that Early Childhood Care and Education classrooms achieve their educational goals. Implementing training programs that meet international ECCE standards is recommended and could potentially rectify these shortcomings, thereby enhancing learning results for young children in Punjab, as suggested by Ansari et al. (2024).

Conclusion

Deep-seated structural issues within the Punjab Early Childhood Care and Education (ECCE) system in Pakistan include a severe dearth of teachers, insufficient training, and inefficient allocation of resources. According to the quantitative data, there are 107,372 vacant teaching positions in Punjab, which further intensifies the crisis by resulting in understaffed and overcrowded ECCE classrooms. In more than 70% of schools, having multiple age groups under a single caretaker is a common situation that negatively affects the quality of early childhood education. ECCE materials and learning kits which were designed to improve cognitive and social development, are often underutilized in over 50% of institutions,

showing that there are shortcomings in teacher readiness and the strategies used for implementation.

In-depth insights from structured interviews support these numerical findings, providing a more nuanced understanding of the actual classroom environments in ECCE settings. Caretakers and teachers consistently reported that children aged 6-12 years old were in ECCE classes, causing disruption to the learning environment for younger pupils. A significant majority of ECCE teachers and caretakers, which is around 95%, acknowledged that they did not have formal training, a fact that is often compounded by IT-related issues which sometimes cause head teachers to ignore or delegate online professional development opportunities. The absence of structured training is directly linked to the lack of organized activities, as a significant number of ECCE classrooms operate more like daycare settings than educational learning environments.

The Punjab Human Capital Investment Project, despite facing numerous critical challenges, has demonstrated potential in increasing infrastructure and enhancing knowledge about Early Childhood Care and Education programs. Interviews with educators and caretakers indicate that without efficient teacher recruitment and training systems, these programs will largely fail to achieve their intended goals. A sustainable and high-quality early childhood education framework should be developed through prioritizing structured training, the optimal use of resources, and community involvement.

For achieving universal, high-quality ECCE in Punjab, a comprehensive approach grounded in evidence is necessary. Implementing effective teacher recruitment methods, developing training programs

tailored to early childhood education, rearranging classroom layouts, and guaranteeing that resources are distributed fairly are all crucial steps in addressing the systemic flaws pinpointed in this study. Implementing these changes will allow Punjab's ECCE sector to overcome policy shortcomings and operational inefficiencies, ultimately creating a more effective and developmentally appropriate early learning environment for all children.

Future Recommendations

Comprehensive Teacher Training Programs: Our programs need to design advanced training systems that align perfectly with how early childhood service provider's work. Training programs will teach both important learning principles and their practical application to suit different age groups using ECCE kits and management resources.

Teacher Recruitment and Retention: Attracting qualified teachers to disadvantaged schools begins when employers receive tax-deductible incentives plus advanced training to hire experienced educators at competitive pay rates. ECCE recruitment efforts must find teachers with the training needed to work in early childhood education programs.

Enhanced Resource Utilization: The educational system should monitor how teaching tools are distributed and used at each classroom. The traditional assessment process helps us identify when our resources aren't being effectively used. The assessments deliver solutions to address these problems.

Strengthening Policy Implementation: New ECCE guidelines should focus on lower student-faculty ratios and higher classroom

quality by placing students into appropriate learning conditions based on their age group. Policymakers need stakeholder collaboration because these partners link approved objectives directly with everyday teaching requirements.

Community Engagement: The community needs to help create better education strategies alongside parent participation to show people why ECCE benefits children. Our program will create an educational environment that supports student learning.

Targeted Financial Investments: ECCE teaching facilities need dedicated funds to operate and expand alongside the purchase of educational supplies and expanded teacher training options. Our investments will focus on these specific communities using global education experts' research to solve their major learning challenges.

Monitoring and Evaluation Systems: Organizations must set up effective ways to watch the progress of early childhood education programs. Officials should base their regular policy evaluations on performance results from teachers and students plus resource effectiveness measurements.

Research and Development: Researchers need to find effective approaches to early childhood care and education through creative experiments at home and worldwide school model exploration. These top focus areas need to include tech implementation, multi-cultural lesson materials, and long-lasting teacher professional growth strategies. By fixing these main issues the ECCE sector will set equal basic requirements for better early childhood learning in all parts of Punjab.

References

- Ahmad, M., Jatoi, H., & Riaz, S. (2019). Proposed strategies for the effective implementation of early childhood education programme in Punjab. *Global Regional Review*, 4(1), 77-86.
- Ansari, A., Fasih, T., & Humphry, E. (2024). Ten Years of Early Childhood Education (ECE) in Punjab (Pakistan): What Have We Learned?. *Journal of Research in Childhood Education*, 38(sup1), S161-S179.
- Arshad, M., & Zamir, S. (2018). Situational analysis of early childhood education in Pakistan: Challenges and solutions. *JECCE*, 2.
- Artipah, A., Sain, Z. H., & Asfahani, A. (2024). Early Childhood Education Reform in Pakistan: Challenges, Innovations, and Future Prospects. *Absorbent Mind: Journal of Psychology and Child Development*, 4(1), 57-64.
- Bustos-Orosa, M. A. (2024). Early Childhood Education in Philippines. In International handbook on education in South East Asia (pp. 1-26). Singapore: Springer Nature Singapore.
- Fenech, M., Waniganayake, M., & Fleet, A. (2009). More than a shortage of early childhood teachers: Looking beyond the recruitment of university qualified teachers to promote quality early childhood education and care. *Asia-Pacific Journal of Teacher Education*, 37(2), 199-213.
- Fredman, S., Donati, G., & Naicker, S. (2022). New beginnings: The right to equality and early childhood care and education. *South African Journal on Human Rights*, 38(3-4), 167-191.
- Heiskanen, N., Saha, M., Pesonen, H., Viljamaa, E., Poikola, M., Nevala, P., & Karna, E. (2024). The ultimate responsibility? The analysis of the position of special education teachers when the child is left without support in early childhood education. *Journal of Research in Special Educational Needs*.
- Hu, B. Y., Roberts, S. K., Leng Jeong, S. S., & Guo, H. (2016). Challenges to early childhood education in rural China: Lessons from the Hebei province. *Early child development and care*, 186(5), 815-831.
- Hunzai, Z. N. (2009). Teacher education in Pakistan: Analysis of planning issues in early childhood education. *Journal of Early Childhood Teacher Education*, 30(3), 285-297.
- Iqbal, M. Z., Khalid, H. A., & Tufail, M. (2021). Early Childhood Education Programme in Punjab: Voices of Teachers and Head Teachers. *Journal of Educational Sciences & Research*, 8(1), 169-187.
- Kambona, W., & Ndibalema, P. (2025). Examining inequalities in provision of early childhood education in Tanzania: a systematic review. *Cogent Education*, 12(1), 2439161.
- Mahmood, S. (2013). "Reality shock": New early childhood education teachers. *Journal of Early Childhood Teacher Education*, 34(2), 154-170.
- Malik, S., & Asghar, M. Z. (2021). The Effectiveness of Early Childhood Education Program in Public Schools of Punjab. *Journal of Business and Social Review in Emerging Economies*, 7(2), 329-341.
- Masso, S., Campbell, E., Faulkner, H., & Britton, A. (2023). Evaluating resources required to evaluate child outcomes following indirect services in early childhood education centres: A scoping review. *Health Promotion Journal of Australia*, 34(2), 294-302.
- Orkin, K., Abebe, W., & Woodhead, M. (2012). Delivering quality early learning in low-resource settings: Progress and challenges in Ethiopia. Bernard van Leer Foundation.
- Qi, X., & Melhuish, E. C. (2017). Early childhood education and care in China: History, current trends and challenges. *Early Years*, 37(3), 268-284.
- Rafiq, S., Kamran, F., & Afzal, A. (2023). Enhancing professional motivation in the early childhood teacher education: Unraveling issues and challenges. *Journal of Social Sciences Development*, 2(1), 26-43.
- School Information System. (2024). Retrieved September 15, 2024, from Pesrp.edu.pk website: <https://sis.pesrp.edu.pk/>

- Simon, A., Shah, A., Quy, K., & Owen, C. (2024). Financialisation and private equity in early childhood care and education in England. *Journal of Social Policy*, 53(2), 512-529.
- Sumsion, J. (2019). International perspectives on early childhood care and education policy and practice. *The Wiley handbook of early childhood care and education*, 641-660.
- Tekin, A. K. (2016). Attitudes of Omani early childhood preservice teachers toward bilingual early childhood education: Benefits, challenges, and solutions. *Child & Youth Services*, 37(1), 78-91.
- Woodhead, M., Ames, P., Vennam, U., Abebe, W., & Streuli, N. (2009). Equity and quality? Challenges for early childhood and primary education in Ethiopia, India and Peru. Bernard van Leer foundation.
- Yasrab, G., & Shah, S. S. A. (2022). Impact of Early Childhood Education Project on Students' Cognitive Development at School in the Punjab, Pakistan. *Pakistan Languages and Humanities Review*, 6(2), 318-327.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix

Structured Interview Protocols

Sr. No.	Questions	Answers
Regarding Overaged Children in ECCE Classes		
1	Can you explain why children beyond the age range of 3 to 5 years are attending ECCE classes?	
2	How do you think the presence of overaged children affects the learning environment in ECCE classes?	
Promotion and Progress of ECCE Learners		
3	Why do you think no ECCE learners were promoted to the next class after one year?	
4	What factors do you believe contributed to the inadequate delivery of activities and education in ECCE classrooms?	
Overcrowding and Lack of Activities		
5	How does overcrowding in ECCE classrooms impact the teaching and learning process?	
6	Can you describe the types of activities that are typically conducted in ECCE classrooms, if any?	
Training and Skill Development of Educators		
7	What are the reasons that head teachers, ECCE teachers, and caretakers are untrained?	
8	How do you perceive the effectiveness of online training programs in improving ECCE teachers' skills?	
9	Could you elaborate on the challenges faced by head teachers in completing online training due to a lack of IT skills?	
10	How effective were the physical training sessions conducted across Punjab? Did they meet the needs of ECCE teachers?	
Role of Caretakers in ECCE Classes		
11	Why are caretakers primarily responsible for teaching and managing ECCE classes in the absence of qualified teachers?	
12	How does this situation affect the quality of education and care in ECCE classes?	
Merging of Playgroup, Nursery, and ECCE Classes		
13	What challenges arise from merging Playgroup, Nursery, and ECCE classes, particularly when only one caretaker manages all groups?	
14	In your view, how does this merging compromise the core objectives and goals of ECCE?	
Lack of Activities in ECCE Rooms		
15	Why do you think no activities were conducted in ECCE rooms for learners?	
16	Do you believe the inefficiency of teachers or the shortage of staff is the primary reason for this issue?	
Underutilization of ECCE Kits		
17	Why do you think more than 50% of schools are not utilizing ECCE kits effectively?	
18	What are the key reasons for caretakers and teachers not being able to use ECCE kits?	
Engagement and Training of Teachers in ECCE Classes		
19	Can you explain why teachers are not engaged with ECCE classes or trained in using ECCE kits?	
20	How do you think this lack of engagement and training affects the overall quality of education in ECCE?	
Misuse and Underutilization of ECCE Classrooms		
21	What factors contribute to the misuse or underutilization of ECCE classrooms?	
22	How does the shortage of teachers and untrained staff affect the compliance with ECCE guidelines and requirements in classrooms?	