



Assessment of Early Childhood Care and Education Program at Primary Level in District Mandi Bahauddin

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Abstract

This study investigates the effectiveness of Early Childhood Care and Education (ECCE) programs in fostering holistic development among young children. The primary objectives were to explore teachers' perceptions regarding the efficacy of ECCE initiatives, identify challenges faced during implementation, evaluate their impact on student enrollment, and propose actionable recommendations for program enhancement. Guided by a positivist paradigm, the research employed a quantitative, descriptive design. The population comprised 170 primary-level schools equipped with ECCE classrooms in District Mandi Bahauddin, covering the three Tehsils: Malikwal, Mandi Bahauddin, and Phalia. Using a convenience sampling technique, 118 schools were selected, with the sample size determined via an online calculator at a 95% confidence level and 5% confidence interval. Data were collected through structured surveys and analyzed using SPSS. Results indicated a notable increase in student enrollment and engagement in ECCE programs, largely attributed to the presence of safe, welcoming, and stimulating classroom environments. Nevertheless, several critical barriers were identified, including inadequate funding, a shortage of trained educators, and low parental involvement. Based on these findings, the study recommends improving teacher training initiatives, strengthening collaboration between schools and families, and ensuring consistent access to quality educational materials and infrastructure. These measures are essential for enhancing the overall impact and sustainability of ECCE programs.

Keywords:

Early Childhood Care and Education, ECCE Effectiveness, Student Enrollment, Teacher Perception, Program Challenges, Educational Development, Parental Involvement, Early Learning, Mandi Bahauddin, Quantitative Research.

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Introduction

Education is a powerful tool for personal and societal development. It involves acquiring skills, knowledge, values, and techniques necessary to fulfill our responsibilities toward family, community, and nation (Barrichello et al., 2020). Education equips individuals with the ability to perceive and interact with the world thoughtfully and critically. It broadens our understanding, encourages curiosity, and strengthens self-confidence. It also helps individuals grow professionally and personally, becoming productive and responsible members of society. Moreover, education enables one to make sound decisions, thereby contributing to the progress of a nation. In today's modern world, education is the driving force behind technological advancement and economic development, making it essential for everyone to survive and thrive in a competitive environment (Barrichello et al., 2020). Quality education must go beyond textbooks and exams to focus on holistic child development—intellectual, social, emotional, and physical—regardless of gender, race, or economic background (Gonzalez et al., 2020). The Sustainable Development Goals (SDGs), especially Goal 4, established by UNESCO, emphasize inclusive, equitable, and quality education for all by 2030 (Gonzalez et al., 2020). One of the key components of achieving this goal is Early Childhood Care and Education (ECCE), which supports the development of children from ages 3 to 5. Scientific evidence shows that early years are critical for brain development. Lack of proper nutrition, care, and educational stimulation at this stage can cause long-term negative effects on a child's development (Bai et al., 2020). ECCE focuses on nurturing children in a safe, engaging, and stimulating environment to prepare them for formal schooling. The ECCE model includes play-based learning, trained caregivers, and well-designed learning corners. In Pakistan, ECCE was introduced in the 1970s through informal Katchi classes, but due to limited resources and political changes, the model could not sustain itself effectively. These classes were not child-centered or play-based, and no proper records of enrollment were maintained (Walsh, 2016). Today, ECCE in Punjab is being revived through public and private sector efforts, with over 3,000 classrooms functioning in various districts. International organizations like UNICEF and Plan International have supported the development of ECCE-friendly classrooms and teacher training (PESRP, 2017). Despite this progress, ECCE still faces challenges such as lack of infrastructure, limited funding, and insufficient awareness about its importance. The government has recently reintroduced Katchi classes as part of formal primary education, yet proper implementation is still lacking. This study aims to assess the impact of ECCE programs on students' enrollment at the primary level in District Mandi Bahauddin. It will explore teachers' perceptions, the significance of physical classroom environments, and identify challenges in ECCE implementation. The findings of this research will offer practical recommendations for improving ECCE in public schools. In the long term, enhancing ECCE can lead to better school readiness, increased enrollment, and stronger foundations for lifelong learning and national development.

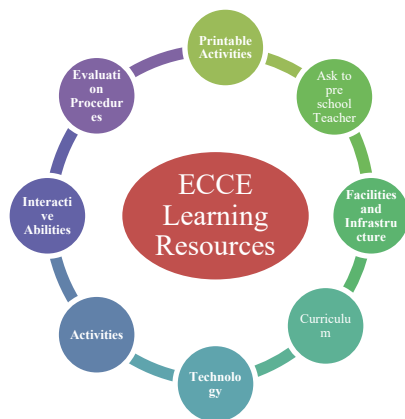
Research Objectives

The research objectives of the study were:

1. To find out the perceptions of teachers about the effectiveness of Early Childhood Care and Education program.
2. To check the impact assessment of the ECCE program on students enrollment in schools.
3. To find out the importance of physical infrastructure in the learning environment of ECCE rooms.
4. To find out the problems regarding the implementation of early childhood program in schools.
5. To formulate the recommendations for the improvement of early childhood program.

Literature review

This chapter reviews national and international literature highlighting the importance and quality of Early Childhood Care and Education (ECCE), particularly in Pakistan. Research indicates that the age between three and eight years is the most critical for a child's learning and development (Camilli et al., 2010). Copple and Bredekamp (2009) emphasized that ECCE promotes holistic growth and lays the foundation for future academic success. Camilli et al. (2010) further noted that systematic support from school staff is crucial for effective ECCE implementation. Sylva et al. (2011) highlighted the need for attention to children's learning, play, emotions, and nutrition. Rao et al. (2015) explained that play-based learning, creativity, and early academic exposure all contribute significantly to children's development. Similarly, Sunarti et al. (2013) concluded that ECCE prepares students to progress confidently to the next education level. Cortázar (2015) stressed that quality learning environments at school and home enhance language, social, and cognitive development. The Government of Punjab (2017) emphasized the introduction of a high-quality Early Childhood Care and Education (ECCE) program through policy development, training, and systematic implementation under the Punjab Education Sector Plan (2013–2017). Despite efforts under PESP-III (2016–2021) to improve ECCE access, only 37% of 7.4 million children aged 3–5 attend preschool in Punjab. Ismail and Awan (2019) found a direct correlation between ECCE and student enrollment in Multan, highlighting the significance of environmental factors. Cappelen et al. (2020) stressed the need for educators to handle preschoolers with care, ensuring focus on play, emotional well-being, health, and learning. Li et al. (2020) argued that ECCE builds a foundation for student skill development and family involvement. Harini et al. (2023) observed that children engage more actively in academics when learning is play-based and creative. Warren (2007) noted that at age four, children become socially aware, and ECCE plays a key role in their adaptation. Barnett (2008) emphasized that quality preschool experiences positively affect long-term academic success. Syed et al. (2011) explained that while many private institutions offer structured nursery education, few meet Montessori standards. Khadijah (2016) advocated that parents, regardless of education, must understand child development to support ECCE. Guven (2020) reinforced the role of parental involvement in successful ECCE outcomes. Malta and Vieira (2021) highlighted the importance of early learning connections for readiness. According to UNESCO (2006), ECCE in Pakistan targets children aged 3–5 through both formal and informal settings. Harini et al. (2023) also reaffirmed the impact of play on early education. Pakistan's ECCE policy roots trace back to the 1947 Education Conference, with successive policies expanding support for Katchi classes and ECCE integration (Government of Pakistan, 2007). Continued reform and structured implementation are essential to achieve SDG 4 and ensure quality pre-primary education for all. Rao and Pearson (2015) highlighted various learning tools in ECCE, such as printable activities that enhance creativity through cut-and-paste tasks. Colker (2008) emphasized the teacher's role in boosting children's confidence and social interaction. Nuttall (2019) stressed the need for inclusive infrastructure, clean facilities, and assistive tools for children with special needs. OECD (2012) noted that technology aids learning through educational videos and interactive tools. According to Diale (2008) and Davies et al. (2009), structured activities and a playful curriculum improve learning, while Elliott (2006) underlined developing communication skills through interactive opportunities.



Rubin et al. (1963) and Weikart et al. (1971) introduced ECCE models that prioritize child-led learning and social development through guided routines and activities. Manning et al. (2017) emphasized diverse teaching models like the DI and HS approaches, which influence classroom outcomes based on teacher competency. Margrat (2000) and Rehman (2006) advocated for trained ECCE staff, stipends, and better facilities to boost enrollment. Afzal et al. (2006) and Hussain & Sultan (2010) linked ECCE with improved enrollment and reduced dropout rates, especially in Punjab. Barnett (2011) and Ismail (2019) confirmed that quality ECCE fosters cognitive, emotional, and social growth, encouraging consistent student participation in early education. Grindel et al. (2016) emphasized that the early years, especially up to age three, are vital for a child's developmental foundation and parental involvement is essential. Jung and Hassan (2016) highlighted that ECE broadens children's worldviews and enhances their cognitive and social skills. Campbell et al. (2001) and Anderson et al. (2003) showed that ECCE improves academic performance, especially in literacy and language. Grindal (2011) found ECCE students perform better socially and academically up to grade 8. Westhues and Macleod (2003) stressed the need for a well-structured, values-based ECCE curriculum. Shonkoff (2000) and Heckman (2006, 2011) revealed that quality ECE yields long-term educational and economic benefits, especially for disadvantaged children. Jung and Hassan (2014) and Melhuish et al. (2015) supported that ECCE reduces early learning disparities and should be integrated into national education policy. Early Childhood Care and Education (ECEC) plays a vital role in shaping a child's developmental trajectory. Cortázar (2015) emphasized that ECEC has a stronger impact when conducted in structured, center-based settings and complemented by supportive home environments. Grindal et al. (2016) found that parenting education within ECEC—especially programs involving hands-on activities and regular home visits—significantly enhances children's cognitive and pre-academic development. Jung and Hassan (2016) highlighted the success of England's Sure Start initiative in integrating health, education, and social services, improving long-term outcomes for children. McCoy (2017) argued that early learning programs foster resilience, reduce dropout rates, and support academic success, particularly in low-income regions. Egert et al. (2018) showed that professional training for ECEC teachers improves instructional quality, which directly influences child development. Evans et al. (2021) emphasized that education, beginning in early childhood, is the foundation of societal progress, shaping communication, reasoning, and character. Saracho (2023) supported these claims, stating that early ECEC participation promotes emotional and cognitive growth, especially in under-resourced settings. Overall, research confirms that well-designed ECEC programs positively impact academic, social, and behavioral outcomes, making early investment in such education essential for both individual and national development.

Research Method

This study employed a **quantitative research method**. Methodology is a core aspect of research that provides a framework of methods, procedures, and strategies for achieving the

study's objectives. It enables researchers to address their research questions systematically and effectively (Bazaar, 2014).

Research Design

The study used a **descriptive research design**. Descriptive design involves systematically gathering, organizing, and analyzing data to understand and explain a phenomenon. It also includes logical reasoning, data interpretation, and validation of research questions (Jiang et al., 2018).

Research Instrument

A **self-constructed questionnaire** was utilized as the primary research instrument. It consisted of two sections: the first included demographic details of participants and the second contained 38 items aligned with the study's objectives.

Scale of the Research Tool

The instrument used a **5-point Likert scale** to assess participants' responses.

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Reliability of the Instrument

The instrument demonstrated **acceptable reliability**, with a **Cronbach's alpha of 0.70**. Reliability was confirmed through pilot testing and statistical analysis. The instrument was distributed to seven participants to assess internal consistency and ensure stable measurement.

Sample and Sampling Technique

The sample size of the study was 118 school teachers determined by using an online sample size calculator; at www.surveysystem.com keeping a confidence level of 95% and a confidence interval at 5. A convenient sampling technique was used to collect data.

RESULTS AND DISCUSSION

Table 4.1: Distribution of the respondents according to their Gender

Gender	Frequency	Percent
Male	59	50%
Female	59	50%
Total	118	100.0

Table 4.1 indicates the frequency distribution about the gender which means 50% of the respondents were male and 50% of the respondents were female.

Table of 4.2: Mean value, standard deviation, weighted score and rank order of ECCE Program effectiveness

Statements	Mean	S.D	WS	Rank order
ECCE program incorporated holistic development of individuals in early stages of education.	4.98	1.94	588	1
I believe that incorporation of ECCE program into educational activities enhances children's engagement.	4.87	1.05	575	2

ECCE program allows children to enhance their understanding of topic.	4.76	1.09	562	3
ECCE program incorporate activities in class that promote cognitive, social, emotional, and physical growth of children.	4.75	1.09	560	4
I believe that supporting holistic development in early childhood lays the foundation for lifelong learning.	4.69	1.08	553	5
Incorporating activities that promote cognitive, social, emotional, and physical growth.	4.54	1.25	536	6
A child-centered approach, where teaching and activities are tailored to individual children's interests and needs.	4.44	1.07	524	7
Implementing a child-centered approach in early childhood education ensures that each child's unique strengths.	4.34	1.98	513	8

Table 4.2 highlights the high perceived effectiveness of the ECCE (Early Childhood Care and Education) program. The highest-ranked statement reflects the program's focus on holistic child development (Mean = 4.98), indicating strong agreement.

Participants also acknowledged enhanced engagement and understanding among children due to ECCE activities, evident from closely ranked scores (Means 4.87 and 4.76).

Lower-ranked items, such as implementing child-centered approaches (Mean = 4.34), suggest areas needing more emphasis or practical reinforcement.

Table 4.3

Mean value, standard deviation, weighted score and rank order of Impact of ECCE program on Enrollment

Statements	Mean	S.D	WS	Rank order
With the introduction of ECCE programs, there has been a noticeable increase in student enrollment rates.	4.85	1.06	572	1
ECCE programs have helped reduce barriers to enrollment.	4.74	1.99	559	2
Children from diverse backgrounds are now more likely to enroll in early childhood education programs.	4.65	0.78	549	3
The recognition of ECCE as a critical stage of development had resulted in improved enrollment opportunities.	4.54	0.74	536	4
ECCE programs have helped address cultural barriers to enrollment that needs in diverse communities.	4.47	0.97	527	5
After the introduction of ECCE programs, there has been a noticeable decrease in student dropout rates.	4.22	0.13	498	6

Statements	Mean	S.D	WS	Rank order
Beginning of ECCE programs, there has been a noticeable increase in school retention rates.	4.22	0.98	498	6
Before ECCE programs, student enrollment rates in early childhood education were comparatively low.	4.15	1.34	490	7

Table 4.3 focuses on ECCE's impact on enrollment. A significant increase in enrollment rates post-ECCE introduction (Mean = 4.85) topped the responses, indicating its success in attracting children.

Barriers to enrollment have been reduced (Mean = 4.74), and diverse communities are showing greater participation, reflecting the program's inclusive appeal.

However, retention and dropout-related responses received comparatively lower ranks, pointing to potential long-term sustainability challenges.

Table 4.4 Mean value, standard deviation, weighted score and rank order according to recommendations for the improvement of early childhood program

Statements	Mean	S.D	WS	Rank order
Effective teacher training programs.	4.64	2.01	548	1
Early childhood programs can promote holistic development.	4.58	2.01	540	2
Collaborating with parents and caregivers to actively participate.	4.57	1.97	539	3
Providing high-quality educational resources.	4.42	1.86	522	4
Creating an inclusive environment that celebrates diversity.	4.32	1.86	510	5
Regular assessment and evaluation of early childhood programs.	4.13	1.65	487	6

Table 4.4 (Recommendations) emphasizes the importance of teacher training (Mean = 4.64) and parental involvement for effective ECCE execution.

Resource provision, inclusivity, and evaluation were also valued but ranked slightly lower, indicating room for improvement.

Table 4.5 Mean value, standard deviation, weighted score and rank order according to problems regarding the implementation of early childhood program in schools

Statements	Mean	S.D	WS	Rank order
Insufficient funding and resources often prevent early childhood programs.	4.89	1.84	577	1
Lack of trained early childhood education professionals.	4.72	1.97	557	2

Limited parental engagement in early childhood programs.	4.61	1.87	544	3
Inadequate infrastructure and facilities hinder comprehensive early childhood programs.	4.54	1.92	536	4
Cultural and societal norms can hinder early childhood program acceptance.	4.43	1.73	523	5
High student-to-teacher ratios in early childhood classrooms.	4.35	1.67	513	6
Inconsistent policies and regulations at different levels.	4.25	1.45	501	7
Limited access to professional development opportunities.	4.11	1.98	485	8

Table 4.5 (Problems) identifies insufficient funding (Mean = 4.89) and lack of trained professionals as major challenges to ECCE implementation.

Cultural norms, high student-teacher ratios, and inconsistent policies also hinder the program's success, requiring systemic reforms.

Table 4.6 Mean value, standard deviation, weighted score, and rank order of Importance of Physical Infrastructure

Statements	Mean	S.D	WS	Rank order
The classroom environment in the (ECCE) setting is designed to be welcoming, safe, and foster children's curiosity and engagement.	4.72	0.70	557	1
The classrooms have enough space for the ECCE seating plan.	4.67	0.95	551	2
Wall paintings in the (ECCE) program are thoughtfully designed to create a stimulating and enriching environment.	4.50	0.10	531	3
The playground is available for Early Childhood Education (ECCE) outdoor activities.	4.43	0.98	523	4
The learning corners in our educational setting provide engaging and hands-on opportunities for children to explore and learn.	4.42	0.94	522	5
The classrooms were well-ventilated.	4.32	1.1	510	6
Place child-size furniture inside of your ECCE classroom.	4.28	1.25	505	7
Create whiteboards that are visually appealing to children.	4.12	1.08	486	8

Lastly, Table 4.6 on physical infrastructure shows that a welcoming, safe classroom environment (Mean = 4.72) and spacious seating are vital for ECCE success.

Lower ranks for visual aids and child-sized furniture indicate physical resource gaps that need to be addressed to enhance learning quality.

Overall, the data indicates strong support for ECCE programs, but highlights the need for improved infrastructure, teacher development, and long-term engagement strategies.

Recommendations

- Implement a child-centered approach in early childhood education and enhance the strengths of students.
- Increase ECCE programs in schools where student enrollment rates in early childhood education were comparatively low.
- Check the regular assessment and evaluation of early childhood programs.
- Provide unlimited access to professional development opportunities.
- Provide different visual aids in ECCE programs for the effective teaching learning Process.

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