Teachers' Perceptions of Early Childhood Care and Development Centers: Effects on Pre-Primary Students in Bhutan

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Abstract

This mixed methods research aimed at investigating how students' enrollment in Early Childhood Care and Development (ECCD) Centers effected their developmental skills as they began their formal education at the Pre-Primary level through teachers' perceptions. The respondents comprised of 35 teachers' teaching the Pre-Primary level across 13 schools in one of the western districts in Bhutan. The quantitative and qualitative data were collected using survey questionnaires and semi-structured interviews respectively. The findings were analyzed using descriptive statistical analysis and thematic analysis. The teachers perceived that the preparedness of the students who attended ECCD Centers before starting Pre-Primary was at a high level (Mean=3.73) in terms of overall developmental skills and opined participation in such programs as important. Hence, the study recommends students participation in such programs

before beginning their formal education and the need for prioritization at national level through increased investment and awareness programs.

Keywords: early childhood care and Development (ECCD) centers; perceptions; developmental skills; pre-primary

1. Introduction

Early childhood care and education is known as early childhood care and development (ECCD) in Bhutan. The programs started in the European countries in the 19th century (early 1970s) to provide care and prepare the children for the formal school (Kamerman, 2006). However, it is a recent development in Bhutan and gained attention only from early 2000s due to rural to urban migration, growing workforce and the emergence of nuclear families which led to the demand of child care services (Sims & Pedey, 2015).

Likewise adoption of the United Nations Convention on the Rights of the Child and Education for All which focused on "expansion of early childhood care and education" as one of the goals towards achieving the learning needs of all by 2015, led to increased prioritization of ECCD (ECCD & SEN Division, 2014) Furthermore, the growing number of evidences on foundations of brain development in the early years and later learning augmented the need for focus on ECCD (Brotherson, 2009; Klass, Needlman, & Zuckerman, 2003). Brotherson (2006) states that it is crucial to provide the best opportunities for learning when the brain is a kind of "super sponge" and develops more rapidly (between birth and age five) than during any other subsequent period.

Therefore, by the 10th and 11th Five Year Plan (2008-2013, 2013-2018) ECCD was highly prioritized (Brooks & Wangmo, 2016). A National ECCD Policy was framed which

encompasses services provided to support learning and development of all children in the country, through three key strategies: (i) Home based parenting education and intervention through mass media, health outreach services, and non-formal education programs for children 0-2 years of age. (ii) Initiation and support for center-based ECCD programs such as day care centers, work place based centers and community based centers for early learning opportunity for children 3-5 years of age, and (iii) Interventions in schools to improve teaching-learning practices for the children in the early years of formal school (Brooks & Wangmo, 2016).The Department of ECCD & SEN collaborates with the private sectors, corporate sectors and non-governmental organizations such as Save the Children and UNICEF in fostering ECCD in Bhutan.

The Ministry of Education particularly emphasized on promoting the early learning opportunities for children aged 3 to 5 years through increased access to center-based ECCD programs (Pisani, et al., 2017). These main objective of ECCD Center is to provide care and support for the holistic development of the children and also to ensure the smooth transition of the children to the formal schooling (ECCD & SEN Division, 2011).

Yoshikawa, Weiland, & Brooks-Gunn, 2016, support that early childhood education experience boosts children's cognitive skills which include language, literacy and math skills. It also enhances children's socialization, behavioral and self-regulation skills in primary schools. Likewise, Sawhill (2016) and Zigler, Gilliam, & Jones (2006) agree that access to a quality early childhood education program contributes to higher school achievement, reductions in grade retentions and lowering school drop outs.

Despite recognizing the significance of ECCD around the world and in Bhutan, there are a total of only 340 ECCD Centers spread across 20 districts of the country (National Statistics

Bureau, 2018). The Annual Education Statistics 2018 reports that ECCD coverage is still minimal with only 23.4% of the 3 to 5 year olds enrolled in an ECCD Center. This statistics clearly proves that only a minority of Bhutanese children start their formal education in the Pre-Primary level with prior ECCD experience.

Pre-Primary is the first year of formal education in Bhutan and all children aged 6 are enrolled in school at the Pre-Primary level regardless of ECCD experience. As children make this new shift, they have to cope with academic and new social environment (Boyd, Barnett, Bodrova, Leong, & Gomby, 2005; O 'farrelly & Hennessy, 2013).This can be a challenging period for all especially the disadvantaged children due to minimal opportunity for stimulation and learning at home (UNESCO, 2005). Hence, preparing the children for a successful start is important as children who start their Pre-Primary without any preparedness are said to lack behind academically, and are at risk of dropping out of school and face unemployment in the later years (Stedron and Berger, 2010).

This specifies the need of concrete evidence to confirm the effect of ECCD intervention through studies and advocate to the general public. This need is reflected in the Bhutan Education Blueprint 2014 to 2024 that despite government's initiatives to enhance access to ECCD programs by expanding community-based ECCD Centers in the rural area, minimal children (23.4%) were enrolled in such programs (Ministry of Education, 2014). The cause for low enrollment was revealed as "lack of awareness on the role of ECCD in preparing children for formal schooling" (Ministry of Education, 2014). Although there is widespread evidence on significance of ECCD programs around the world, limited studies are available on its effectiveness in Bhutan. There is particularly no studies done on Pre-Primary teachers' perceptions regarding ECCD Centers.

Therefore, the researcher intended to validate the effects of ECCD Center participation on children's preparedness as they started formal education through Pre-Primary teachers' perceptions. This study also highlighted how the Pre-Primary teachers perceived the need for students to attend ECCD Centers before starting formal education.

2. Research Objective

2.1 To investigate how students' enrollment in Early Childhood Care and Development (ECCD) Centers effects their developmental skills as they begin their formal education at the Pre-Primary level through Pre-Primary Bhutanese teachers' perceptions.

3. Research Questions

3.1 How do Bhutanese Pre-Primary teachers' perceive the effects of Early Childhood Care and Development (ECCD) Centers on students' developmental skills as they start formal education at the Pre-Primary level?

3.2 What is the teachers' perception on the students' need to attend Early Childhood Care and Development (ECCD) Centers before starting formal education?

4. Literature Review

The Early Child Care and Development (ECCD) Centers across the country aim to provide care and stimulation to young children (3-5 years) following developmentally appropriate principles and practices within the Bhutanese cultural context. The Early Learning and Development Standards (ELDS) ensures the consistency and the quality of the programs in the country by identifying developmental outcomes of children in the following six key areas (ECCD & SEN Division, 2014):

4.1 Physical and motor development

A child's physical development is an important domain to be considered in the ECCD centers. It comprises of sub-domains such as physical wellbeing, health and motor development. The ELDS mandates the ECCD Centers to engage children in meaningful play with their peers using challenging materials to foster physical development. For instance, encouraging children to participate in activities such as running, hopping, coloring, cutting shapes and threading beads to enhance gross and fine motor skills. (ECCD & SEN Division, 2014).

4.2 Social and emotional development

ECCD Centers provide a platform for the social development of young minds by augmenting interaction with people other than their family members in a safe learning environment (Palmer, 2015). For a child to develop social and emotional skills, interaction with their peers through play should be highly encouraged. Also, engaging the children in group play and discussions can instill values such as taking turns, seeking permission, cooperating and respecting each other. This, in turn, will enhance their interpersonal skills and build a sense of trust, confidence and empathy for their friends, adults and people around them (S. Kennedy, 2019).

4.3 Language, literacy and communication

The foundations for literacy development in children is laid from the experiences that they have with language and print at home and the immediate environment (Huisman , 2012)**.** As children develop speaking and listening skills, they build the foundations for literacy. The foundational knowledge and skills that children have about reading and writing before they can read and write is called as early literacy skills (Ghoting & Martin-Diaz, 2005). These skills are oral language, understanding print, alphabet knowledge and early phonological awareness. These

skills are interrelated and are crucial for success at school and later in life. (ECCD & SEN Division, 2012). Therefore, the ELDS necessitates the centers to provide opportunities for children to interact and express their understanding through various activities such as object naming, description, storytelling, songs and rhymes.

4.4 Cognition and general knowledge

Supporting the cognitive development of children in their formative years is an essential developmental and school readiness component. The ECCD facilitators are required to stimulate the cognitive abilities of the children by having them make observations, understand cause and effect and understand about numbers and counting. They should further be prompted to solve problems, think logically, and form explanations (ECCD & SEN Division, 2014). Children's early numeracy skill is found to correlate with math achievement in 1st and 3rd grades respectively (Jordan, Glutting, & Ramineni, 2009). It, therefore, ascertains the fact that much can be done in the years before school, both at home and in ECCD Centers to encourage such development.

4.5 Approaches towards learning

Approaches to learning refers to the observable behaviors that describe how children participate in classroom interactions and learning activities (Chen & McNamee, 2011). Some of the important skills associated with a positive approach to learning include curiosity, task persistence, attentiveness, self-direction, problem solving and creativity (Conn-Powers, 2006). Being able to acquire and use such skills enhances preparedness and learning in children as they start school. The center-based early childhood programs in the country are supposed to provide

children with opportunities to engage in fun and stimulating learning experiences that promotes children's curiosity, interest and imagination (ECCD& SEN Division, 2014).

4.6 Spiritual, moral, and cultural development

This domain is unique to Bhutan. In this domain the ECCD Centers are required to model the behavior along with the one established at home to promote values such as spirituality, honesty, responsibility and empathy. They are supposed to familiarize children with one's own culture along with learning to respect the differences in culture. With these values in mind the children should be able to show respect, sense of belongingness (identity) and love for one's country and culture (ECCD& SEN Division, 2014).

5. Methodology

5.1 Research Design

The researcher employed a mixed method approach to fulfill the research objective. A survey questionnaire was administered to find out how the Bhutanese Pre-Primary teachers perceived the effects of ECCD Centers on the developmental skills of the students. Likewise, semi-structured interviews were conducted with 10 volunteer teachers to study their perception of students need to attend ECCD Centers before starting formal education.
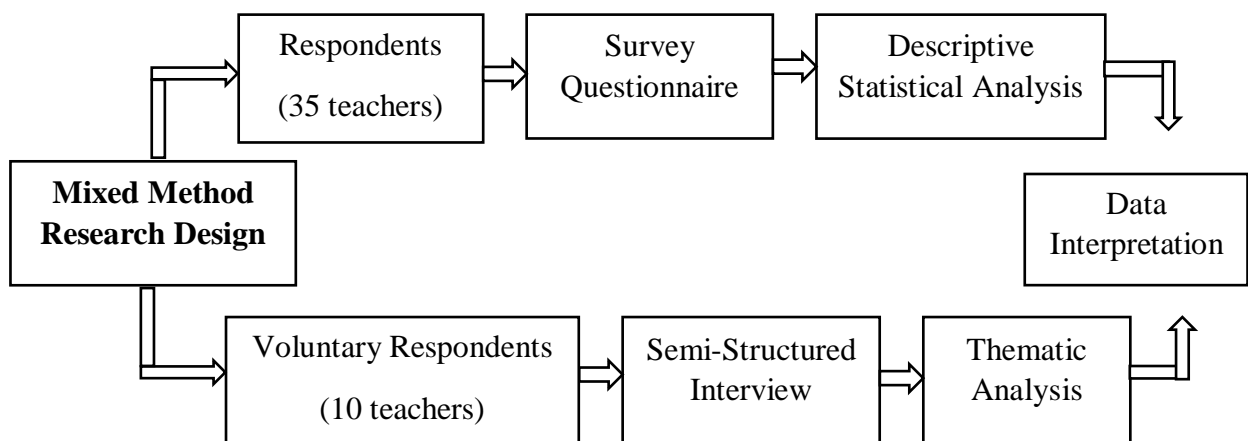

Figure 1 Research Design

5.2 Respondents

A total of 35 teachers currently teaching the Pre-Primary level in 13 schools across a district, in the western part of Bhutan, served as the respondents of the study. Since these teachers teach in schools that have accessibility to ECCD Centers, the respondents have experience in teaching the students who attended ECCD Centers before starting their formal education at Pre-Primary level. It can therefore ensure the authenticity and reliability of the findings.

4.3 Research Instruments

Survey questionnaires and semi-structured interviews were administered to collect the data. The International Development and Early Learning Assessment (IDELA) tool was adapted to design a teacher survey questionnaire to find out the teachers perception regarding the preparedness level of the students' who attended ECCD centers in the 5 areas of developmental skills. The respondents marked the preparedness level of the students who attended ECCD centers for each item based on the five-point Likert scale. Furthermore, the researcher developed five questions to collect the qualitative data. Semi-structured interviews were conducted with the volunteers to gain their perceptions of the need for the students to attend ECCD Centers before starting their formal education in the Pre-Primary level.

Both the instruments were validated by experts from Bhutan and Thailand to obtain the Item Objective Congruence. After the validity, the items with a score of 0.5-1 were used for the survey questionnaire. A total of 28 items that were in the acceptable range were selected. The researcher deleted three items from an initial total of 31 items. The validity score of the questionnaire and the interview questions were 0.84 and 0.93 respectively. The Cronbach's

Alpha (α) for the overall questionnaire was 0.869 which ascertained the reliability of the instrument.

5. Data Collection Procedure

The researcher obtained approval from the Ministry of Education, participating school Principals and the respondents before administering the questionnaires. The anonymity of the respondents and confidentiality of their views were protected by number coding (teacher 1, 2).

6. Results and Findings

The teachers' perceptions of the developmental skills of the students who attended ECCD Centers before starting formal education at the Pre-Primary level were analyzed using descriptive statistics. The data gathered through semi-structured interviews were interpreted using thematic analysis to answer the second research question by categorizing the responses into themes.

6.1 Analysis of the Quantitative Data

The survey questionnaire intended to answer the first research question: *How do Bhutanese Pre-Primary teachers' perceive the effects of ECCD centers on students' developmental skills as they start formal education at the Pre-Primary level*? A summary on the overall developmental skills of the students' have been presented first followed by findings in each of the 5 developmental skills from the survey questionnaire:

6.1.1 Summary of Pre-Primary teachers' perceptions on students' preparedness level in overall developmental skills

Table 1 Overall mean and standard deviation of the developmental skills (n=35)

Sl.no	Developmental Skills	Mean	SD	Interpretation
I	Gross and fine motor development	4.27	0.680	Highest
Ii	Emergent literacy and language	3.58	.801	High
iii	Emergent numeracy	3.41	.939	High
Iv	Social and emotional development	3.84	0.749	High
V	Approaches to Learning	3.55	1.109	High
	Total	3.73	0.748	High

Note: Interpretation for the mean score of the items were from 4.21-5.00 as Highest, 3.41-4.20 as High, 2.61-3.40 as Moderate, 1.81-2.60 as low and 1.00-1.80 as lowest.

The overall developmental skills mean score was 3.73 at a high level. It indicated that the Pre-Primary teachers perceived that students who attended ECCD Centers before starting formal education were well prepared in terms of overall developmental skills. The students were considered to be the most prepared in gross and fine motor development, which was at the highest level (Mean=4.27), followed by the social-emotional development (Mean= 3.84) at the high level. Even though students'' preparedness in emergent numeracy was also at a high level, with a mean score of 3.41, it was rated the lowest.

6.1.2 Pre-Primary teachers' perceptions on students' gross and fine motor development

Table 2 Gross and Fine Motor Development: Mean and Standard Deviation (n=35)

I. Gross and Fine Motor Development	Mean	SD	Interpretation
1. Participate in activities involving basic movements such as running, walking, jumping, skipping and hopping.	4.54	0.657	Highest
2. Use hand-eye coordination to perform simple tasks (example: copying a shape)	4.03	0.891	High
3. Hold and use pencils/colors with control	4.23	0.808	Highest
Average	4.27	0.680	Highest

Note: Interpretation for the mean score of the items were from 4.21-5.00 as Highest, 3.41-4.20 as High, 2.61-3.40 as Moderate, 1.81-2.60 as low and 1.00-1.80 as lowest.

Table 2 shows the mean scores and the standard deviations for the teachers perceptions on the effects of ECCD centers on the Pre-Primary students' gross and fine motor development. The teachers perceived that students who attended ECCD Centers had enhanced gross and fine motor skills (M=4.27), which denotes the highest level. Although the mean score for students being able to use hand-eye coordination to perform simple task was comparatively low, still the mean score interpretation revealed that students preparedness for this item was at a high level (M=4.03).

6.1.3 Pre-Primary teachers' perceptions on students' emergent literacy and language development

Table 3 Emergent literacy and language development: Mean and Standard Deviation (n=35)

II. Emergent literacy and language	Mean	SD	Interpretation
a. Listening & Speaking			
4. Use a variety of words and phrases to communicate ideas	3.71	0.789	High
5. Listen and respond to simple questions appropriately	3.91	0.818	High
6. Understand and follow directions/instructions	3.80	0.797	High
b. Reading			
7. Identify and name the alphabets/letters	3.74	1.067	High
8. Tell the sounds of the letters	2.91	1.245	Moderate
9. Open the book appropriately and point to texts on the page	3.51	1.173	High
c. Writing			
10. Understand that printed symbols such as letters, words and pictures convey a message	3.34	0.938	Moderate
11. Knowledge on left to right writing orientation	3.51	1.121	High
12. Write some alphabets and numbers	3.77	1.060	High
Average	3.58	.801	High

Note: Interpretation for the mean score of the items were from 4.21-5.00 as Highest, 3.41-4.20 as High, 2.61-3.40 as Moderate, 1.81-2.60 as low and 1.00-1.80 as lowest.

The mean scores and the standard deviation of how the teachers perceived the effects of ECCD Centers on the Pre-Primary students' emergent literacy and language development are presented in table 3. The overall mean score of students' emergent literacy and language development was high (M=3.58). For this skill, the items were further divided under three subcategories: listening and speaking, reading and writing. Item 5 of the 'listening and speaking' subcategory, "listen and respond to simple questions appropriately" had the highest mean score (M=3.91). The item with the lowest mean score (M=2.91) at the moderate level was "telling the sounds of the letters" and it falls under the 'reading' subcategory.

6.1.4   Pre-Primary teachers' perceptions on students emergent numeracy

Table 4 Emergent numeracy: Mean and Standard Deviation (n=35)

III. Emergent numeracy	Mean	SD	Interpretation
13.Count to ten or more	4.23	0.910	Highest
14.Identify and name the numbers up to ten or more	3.66	1.282	High
15.Compare objects based on one or more attributes (big, small, long, short)	3.43	0.979	High
16.Sort similar and different objects based on its attributes (size, colour, shape)	3.49	1.040	High
17.Identify the shapes such as circle, rectangle, triangle, square	3.54	1.120	High
18.Basic idea of addition and subtraction (2+2, 3-1)	2.14	1.115	Low
Average	3.41	.939	High

Note: Interpretation for the mean score of the items were from 4.21-5.00 as Highest, 3.41-4.20 as High, 2.61-3.40 as Moderate, 1.81-2.60 as low and 1.00-1.80 as lowest.

Table 4 presents the mean scores and the standard deviation for how teachers perceive the effects of ECCD centers on the Pre-Primary students' emergent numeracy. The overall mean score for this particular domain was high (M=3.41). The mean scores in this area differed greatly, with items in the highest as well as low level. The findings revealed that the students' who attended ECCD centers were able to count to ten or more (M= 4.23). However, the teachers perceived that they had difficulty with basic idea of addition and subtraction (M=2.14).

6.1.5 Pre-Primary teachers' perceptions on students' socio-emotional development

Table 5: Socio-Emotional Development: Mean and Standard Deviation (n=35)

IV. Socio-emotional development	Mean	SD	Interpretation
19.Interact easily with peers and teachers	4.11	0.867	High
20.Work/play cooperatively with the peers	3.94	0.838	High
21. Tell basic information of self, such as name, age, gender, parents.	4	0.767	High
22.Show care and respect for others feelings and needs	3.26	1.010	Moderate
23.Adapt to the rules and routines of the school	3.69	1.051	High
24.Express their needs and feelings openly	4.03	0.954	High
Average	3.84	0.750	High

Note: Interpretation for the mean score of the items were from 4.21-5.00 as Highest, 3.41-4.20 as High, 2.61-3.40 as Moderate, 1.81-2.60 as low and 1.00-1.80 as lowest.

The table above indicates the mean scores for how teachers perceived the effects of ECCD Centers on the Pre-Primary students' socio-emotional development. The overall mean score for this skill was high (M=3.84). All the items in this category fell within the high score range (M=3.69 to 4.11) except for item number 22 which was in the moderate score range (M=3.26). The findings from the data indicated that students were able to interact and work cooperatively with their peers, express their needs and feelings openly and tell basic information about

themselves after attending ECCD centers. Nevertheless, teachers perceived that the students' ability to display care and respect for others' feelings and needs were at a moderate level.

6.1.6 Pre-Primary teachers' perceptions on students approaches to learning

Table 6 Approaches to Learning: Mean and Standard Deviation (n=35)

V. Approaches to learning	Mean	SD	Interpretation
25. Pay attention to the instructions and activities	3.51	1.147	High
26. Focus on the work/task assigned	3.49	1.222	High
27. Stay motivated to complete the task	3.57	1.145	High
28. Show interest and curiosity in learning activities	3.63	1.060	High
Average	3.55	1.110	High

Note: Interpretation for the mean score of the items were from 4.21-5.00 as Highest, 3.41-4.20 as High, 2.61-3.40 as Moderate, 1.81-2.60 as low and 1.00-1.80 as lowest.

Table 6 displays the mean and standard deviation for teachers' perceptions on the effects of ECCD centers on the Pre-Primary students' approaches to learning. The finding depicts that the overall mean score was high (M=3.55). All the items in this domain were within the high score range (M=3.49 to 3.63). This indicates that attending ECCD centers had not only enabled students to focus on instructions and activities attentively but also motivated them to learn with curiosity.

6.2 ANALYSIS OF THE QUALITATIVE DATA

Qualitative findings collected through semi-structured interviews intended to answer the second research question: *What is the Pre-Primary teachers' perception of students' need to attend Early Childhood Care and Development (ECCD) Centers before starting formal education?*

Face to face interviews were conducted with a total of 10 volunteer Pre-Primary teachers with varied teaching experiences, teaching in both rural and urban schools. All the respondents felt that it was important for students to attend ECCD Centers before starting formal education.

Further discussion on why the Pre-Primary teachers perceived the need to attend ECCD Centers resulted in identification of several reasons which were categorized under various themes. However, the teachers also did not deny some of the challenges that they faced regarding the ECCD attendees. The findings from the qualitative data is categorized based on the following themes:

6.2.1 Students who attended ECCD Centers were perceived to have enhanced skills

According to the respondents, students who attended ECCD centers before starting formal education at the Pre-Primary level develop many important skills. Some of the skills that they specifically mentioned as being the most enhanced in these students are basic language and literacy skill such as *alphabet recognition, communication skills*; numeracy skills such as *number recognition;* fine motor skills such as *holding pencils, coloring*; social skills such as being able to *interact with peer and teachers openly*.

6.2.2 Students who attended ECCD Centers were perceived to be confident

The Pre-Primary teachers perceived that students who attended ECCD Centers before starting their formal education were able to interact with their friends and teachers easily, which enabled them to support others and seek help from others without difficulty. Because of their sociable nature, they were also able to take part in the class discussions confidently and express their ideas explicitly. This statement confirms the above claim: *"Since students are sociable, they are able to render help to others and also seek help and learn from others when in need. They never hesitate to ask help from teachers as well. " (Teacher 5).*

6.2.3 Students who attended ECCD Centers were perceived to have academic advantage

The findings from semi-structured interviews stated that the students who attended ECCD Centers gained academic advantage as they started school. The teachers pointed-out that building on their prior knowledge, these students were able to understand the concepts taught faster and better. Teachers also opined that most of the mid-year academic toppers in their classes were students who attended ECCD Centers before starting school. Similarly, a particular interviewee believed that having prior experiences from ECCD Centers uplifted the overall performance of the class. *"Attending ECCDs may not directly influence the achievement of a particular child as it may also depend upon other factors… However, it does uplift the overall performance of the class as the children recapitulate their prior experiences from the center and cope well at same pace." (Teacher 3)*

6.2.4 Students who attended ECCD Centers were perceived to be ready for school

The data from the interviews further revealed that enrollment in ECCD Centers prior to formal education significantly impacted students preparedness to start school. They regarded these students' abilities to cope well with school rules, timings and adapt to the school environment as beneficial for the students. Additionally, the teachers also mentioned that being well equipped with the basic skills, they were very comfortable and ready to begin their formal schooling.

6.2.5 Having students who attended ECCD Centers supported the teaching learning process

The findings from the interview established that ECCD Center attendance supports the teaching learning process in the classroom. Besides individual gains, the teachers stated that when the students were well prepared to start school, the teachers could conduct the lessons as

planned. Efficient delivery of lessons thus allows the teachers to focus on fulfilling the academic objectives. *"Since the children are already exposed to some essential basic skills necessary for class PP, it becomes easy for teachers to guide them…lesson delivery is made efficient and it benefits the flow of the lesson." (Teacher 3)*

As aptly stated by an interviewee, if done in the right manner, such programs could yield nothing other than benefits. However, since early childhood education is a fairly new development in Bhutan, there were some challenges that the interviewees were concerned about:

6.2.6. Students who attended ECCD centers were perceived to be restless

A common concern that was raised by the Pre-Primary teachers with regard to the students who attended ECCD Centers was that these students were "restless" and it was challenging to keep them engaged every time. The teachers considered too much exposure to a free environment in the centers as one of the reasons for such behavior. *"Children are mostly exposed to play and they have the right to do things their way in the ECCD centers. So as they transit to school it gets difficult to gain their attention." (Teacher 3)*

6.2.7 The teachers found it difficult to correct the acquired knowledge

According to the teachers, letter formation was one of the most common issues they encountered in students who attended ECCD centers. The students had developed an incorrect letter formation technique, which the teachers found it difficult to undo. The teachers perceived that it was important for students to learn the correct mechanics of letter formation from the beginning of the school education for better handwriting in the future. *"A disadvantage of attending ECCD is that some children from ECCD come with wrong letter formation. Correct*

letter formation is essential for their handwriting. Sometimes it is difficult to undo what has already been done than to teach new things." (Teacher 6)

7. Discussion

7.1 Findings from the Survey Questionnaire

The findings from this study suggested that the Pre-Primary students who attended ECCD Centers were well prepared, in terms of their overall developmental skills. A total mean score of 3.73 was a clear indication of a high level of preparedness. This translates to the achievement of the center-based ECCD program's objective to "*provide care and support for the holistic development of the children and also to ensure the smooth transition of the children to the formal schooling*" (ECCD & SEN Division, 2011). The findings were consistent with other studies which found that children who participate in early childhood education programs gain more in terms of development, primary school attendance and achievement than those who do not (Ceido, Nayo, & Sampang, 2015; Rao, et al., 2012; Save the Children & UNICEF, 2003). All these studies were also conducted in Asian countries, also striving for early childhood education program expansion amidst the challenging economic conditions.

Amongst the developmental skills, the students were found to be the most prepared in the gross and fine motor development, which was at the highest level (Mean=4.23), followed by the social and emotional development (Mean= 3.84) at the high level. This finding was further substantiated by the interview results in which the teachers opined fine motor skills and social skills as the most enhanced in the students who attended ECCD Centers. This finding correlates to the findings of Cox (2016) and M & S (2015) that student's participation in an

early childhood program increased their literacy, cognitive, prewriting and social skills in the school.

Even though the emergent numeracy domain was also at a high level as per the mean score interpretation (Mean=3.41), it was the lowest amongst the 5 developmental skills. Similar findings on weaker gains in early literacy, numeracy and social–emotional development compared to the others developmental areas were identified in the national ECCD impact evaluation conducted in Bhutan (Pisani, et al., 2017). Thus, this findings provide a strong evidence for areas of focus and suggests that much can to be done to stimulate the cognitive aspects of the children, being mindful of the developmentally appropriate practices.

7.2 Findings from the semi-structured interview

The semi-structured interviews with 10 voluntary Pre-Primary teachers further supplemented the findings from the survey questionnaire. The interviews aimed to study the Pre-Primary teachers' perceptions of the need for students to attend ECCD Centers before starting formal education. All the interviewees were of the opinion that it was important for the students to attend ECCD Centers.

The findings revealed that student's participation in ECCD Centers resulted in enhanced skill development and preparedness to start school. The interviewees stated that these students were able to adjust comfortably to the school environment and cope well with the school rules and timings. The finding aligns with Ball (2018) who found out that in addition to academic achievement, ECCD attendance also contributed to student's school readiness and social-emotional development.

The findings were also in line with Lev Vygotsky's social development theory which emphasizes on the importance of interaction for learning through experiences from ones

environment and culture. As these students already have experiences from environment outside their home, it contributes to their capability to adjust to new settings and build relationships with friends and teachers in a new environment.

Additionally, the interviewees were also of the view that students who attended the center-based early childhood education programs such as the ECCD Centers had academic advantage. The findings reported that the Pre-Primary students who attended ECCD Centers learn faster and perform better as they have already mastered the basic skills and build on their prior knowledge. This finding is parallel to studies conducted by Bakken, Brown, & Downing (2017) and Cox (2016) who found that attending early childhood program results in both short and long term academic gains in the 1st and through the 3rd, 4th and 5th grades in school. The long term academic impact was further substantiated in a study by Pholphirul (2016). The researcher established that 15 year old students' who had attended pre-school significantly out-performed those without any pre-school experience in the areas of reading, mathematics and science in the Program for International Student Assessment (PISA).

Besides the impact on each student, the interview data also highlighted that having students who attended ECCD Centers in the class supports the teaching learning process. The teachers mentioned that students' being prepared and equipped with the basic skills contributes to efficient flow of lesson and enabled the teachers to conduct lessons as planned. A similar perception was also described in an impact evaluation study of ECCD programs in Nepal by Save the Children & UNICEF (2003). In addition to being well-prepared for school, the students who attended ECCD programs were also recognized for their abilities to support other students and also to raise the level of expectation within the classrooms.

Along with the significant benefits, some challenges associated with ECCD attendees were also identified through the interviews. One of the common challenges that teachers faced was behavioral issue, and they said one reason could be due to a play-based free setting in the centers. Another reason could be due to the familiarity of the topics taught in the class. Since not all the student's in the class have had the opportunity to start school with enhanced prior learning experiences from home or the centers, the teachers would have to design lessons following the general need. Thus, the repetition of the concepts that they already know could lead to restless and disruptive behavior.

The teachers also faced difficulty to correct the acquired knowledge as a common issue amongst the ECCD attendees. Most of the students who attended ECCD Centers were observed to have developed a letter formation technique which did not correspond to that of the writing mechanics emphasized in Pre-Primary curriculum. This could be due to facilitator's lack of awareness regarding such techniques and their implications on the learners in the future.

Therefore, the findings clearly indicated that there was a need to enhance the instructional quality of the centers by providing necessary trainings and professional development opportunities to the ECCD facilitators. This corresponds to the studies which claim that the effectiveness of the early childhood education programs on improving children's learning and development is highly determined by its quality (Pianta, Downer, & Hamre, 2016). This was also highlighted in a study by Pisani, et al. (2017) in which recommendations for ECCD center expansion without a focus on quality, especially for facilitators, was stated to be wasted investment.

8. Conclusion

Early childhood Care and Development has received due recognition worldwide and is now being accorded high prioritization considering its significance in development of the human capital. Despite the government's effort towards ECCD expansion in Bhutan, it is yet to achieve the global target of universal early childhood education. This study fills the evidence gap on ECCD programs in Bhutan and confirmed the Pre-Primary teachers' perceptions of ECCD programs. The findings concluded that attending ECCD Centers not only enhanced students' developmental skills but it also gave them the academic advantage, prepared them for school and more importantly, contributed positively to the overall teaching and learning processes. Hence, the Pre-Primary teachers perceived the need for students to attend ECCD Centers before starting formal education.

The findings suggests that along with sensitization programs for the general public, there is a need for increased accessibility to more government ECCD Centers, in both rural and urban centers, to enable higher enrollment. Additionally, it is recommended that the service providers and the concerned stake holders ensure the quality by recruiting qualified facilitators who are constantly supported through professional development programs and trainings on a regular basis.

Considering the limited scope of the study, the researchers in the future could conduct similar studies on a larger scale surveying Pre-Primary teachers, parents and the ECCD facilitators to gain a deeper insight on their perceptions. Likewise, an alternate method involving experimental or an observational research could also ensure the authenticity and the reliability of the findings.

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