An Evaluation of the Early Childhood Care and Development Programme in Bhutan

Ministry of Education Bhutan and
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Acknowledgements

By seeking perceptions of stakeholders who are most vested in optimal outcomes for children, in order to evaluate the efficacy of a national ECCD strategy and thereby to identify the way forward, this project has set a high bar. Consequently, the evaluation team would like to express our gratitude to the children, parents, crèche caregivers, ECCD facilitators, primary school teachers, health workers, DEOs and DHOs who have generously shared their expertise in order that we could understand the early childhood care and development sector of the Kingdom of Bhutan. Each participant has contributed valuable information. This information will be used to ensure that national policy decisions can be informed by both ethnographic and statistical data.

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List of Acronyms and Abbreviations

ANC	Antenatal Care
BCDST	Bhutan Child Development Screening Tool
BELDS	Better Early Learning and Development at Scale
BHU	Basic Health Unit
CDST	Child Development Screening Tool
CS	Central School
C4CD	Care for Child Development
C4CD+	Care for Child Development Plus
DEO	District Education Officer
DHO	District Health Officer
DSA	Daily Subsistence Allowance
ECCD	Early Childhood Care and Development
FNPH	Faculty of Nursing & Public Health
FP	Family Planning
GM	General Medicine
GPE	Global Partnership for Education
IEC	Information, Education and Communication
JDWNRH	Jigme Dorji Wangchuck National Referral Hospital
MCH	Mother Child Health
MoE	Ministry of Education
MoH	Ministry of Health
NCDs	Non-Communicable Diseases
NCWC	National Commission for Women and Children
NELDS	National Early Learning and Development Standards
NFE	Non-Formal Education
OPD	Outpatient Department
ORCS	Out-Reach Clinics
P2A	Principal 2A (grade/position)
PGC	Postgraduate Certificate
PNC	Postnatal Care
PTC	Primary Teachers Certificate
QMTEC	Quality Monitoring Tool for ECCD centres
RAF	Resource Allocation Formulation
RENEW	Respect, Educate, Nurture and Empower Women
RGOB	Royal Government of Bhutan
RH	Reproductive Health
RIGSS	Royal Institute for Governance and Strategic Studies
RIHS	Royal Institute of Health Sciences
RNDA	Rapid Neurodevelopmental Assessment
RWSS	Rural Water Supply Scheme
SEN	Special Education Needs

Foreword

Bhutan's commitment to children's development and well-being is evident through the many achievements made over recent decades. Compared to many years ago, children in Bhutan, from the time of their conception through to adolescence and even beyond, have access to better services and more opportunities.

The Early Childhood Care and Development (ECCD) programme in Bhutan represents a key area of partnership between the Ministries of Health and Education together with UNICEF Bhutan that spans over decades. With the Ministry of Health, the partnership has led to the improvement of health services for mothers and newborns from the time of conception up to three years of age. Since 2009, UNICEF's partnership with the Ministry of Education was further developed through support for ECCD services for children from three to five years. ECCD is now gaining momentum as a national priority and is recognized as a critical foundation for human development and lifelong learning in the country's Five-Year Plans. Bhutan has committed to increase access to at least 50 per cent of children aged 3-5 years old by 2024, as specified in the Education Blueprint 2014 to 2024, and 100 per cent by 2030 to meet the global SDG (Sustainable Development Goals) target.

Global research has provided strong evidence that investment in the earliest years of a child's life yields returns that are not only sustainable but also rewarding for children, their families, communities, and societies at large. As Bhutan continues to prioritize ECCD in the national agenda, this ECCD Evaluation report comes at an opportune time. The report brings to the forefront key factors influencing children's development and well-being during their earliest years. It highlights critical strengths and challenges within Bhutan's ECCD sector and provides strategic recommendations for moving forward to achieve the best results for children. A major recommendation is the need for integrated, multi-sectoral ECCD planning and implementation to advance holistic development of children.

This report is the first of its kind for Bhutan in terms of evaluating the ECCD programme through a multi-sectoral lens focusing on health, education, and protection to provide a strong evidence base for sustainable ECCD expansion. In many ways, this report is a monumental initiative that signifies another of Bhutan's commitments to children and the joint effort to build on the progress achieved over the years.

As partners in this joint endeavour, we affirm our commitment to provide a nurturing, healthy, safe, and stimulating environment to ensure the best start in life for every child in Bhutan.

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Executive Summary

This evaluation of the **Early Childhood Care and Development Programme (ECCD) in Bhutan** focuses on the critical contributions of ECCD services in achieving national objectives and global priorities that are aligned with UN Sustainable Development Goals (SDG) Target 4.2. This Target specifies that countries need to ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education. Findings from this evaluation highlight good practices as well as gaps in planning, implementation, budgeting, and coordination, and identify impacts of the ECCD programme on child development. The evaluation also proposes practical and contextualised recommendations for the National Multi-Sectoral ECCD Strategic Plan to strengthen ECCD programmes. In addition, some of the data collected will set a baseline to assess progress towards SDG Target 4.2.

Objectives in Context

The objectives of this study were to assess the relevance, effectiveness, efficiency, and sustainability of the provision of ECCD services in Bhutan. ECCD programmes are recognised in providing strong foundations for human development and lifelong learning in the 12th Five-Year-Plan and the Bhutan Education Blueprint 2014-2024. In particular, under the National Key Result Area 7 'Quality education and skills', an objective is to expand ECCD programmes to reach all children. Therefore, policy documents and national statistics were analysed to determine access rates to ECCD. Furthermore, Bhutan is currently developing a National ECCD Multi-Sectoral Plan and this study endeavoured to support this process of developing the Plan by identifying key strategic and systematic shifts to strengthen multi-sectoral ECCD coordination among major stakeholders.

Overview of Methodology

The Evaluation Team noted the country's definition of ECCD and national priorities in planning the evaluation. For example, the Draft National Education Policy (2019) indicates that the target age group of ECCD services is from conception to eight years, and ECCD services broadly fall into three age-group categories: birth to three years, 3 - 5 years, and 6 - 8 years. Hence, stakeholders concerned with the three age groups were invited to participate in the evaluation.

Bhutan's ECCD provision was evaluated rigorously employing a mixed-methods methodology. The methodological approach and all survey tools were approved by the members of the Evaluation Reference Group and the National Statistics Bureau for the implementation of the evaluation. Analyses of key policy documents pertinent to the ECCD sector in Bhutan were conducted as well as a review of additional data sources that include national monitoring systems and national databases. Observations of ECCD enabled an analysis of existing and planned ECCD policies. New empirical data were collected. Surveys and interviews with stakeholders (including parents/caregivers, crèche caregivers, ECCD facilitators, health workers, secretaries of Centre Management Committees, District Education Officers, and District Health Officers) were conducted between October and December 2019.

The study sample was stratified by region. Within each of Bhutan's three regions, three districts were randomly selected. All participants resided in one of these nine districts. ECCD centres (serving children aged 3 - 5 years) were randomly selected from each district resulting in 51 ECCD centres. Two mobile, one workplace and five private ECCD centres were also purposively selected. Five parent-child pairs were randomly selected from each of these 59 centres (N = 295). A comparison group of parents whose children were not attending an ECCD centres (N = 289) participated in the study. Children's height and weight was also measured to get an estimate of the prevalence of stunting.

In addition, ECCD centre facilitators (N = 100); Centre Management Committee secretaries (N = 9); health workers (N = 14); District Education Officers (N = 15); District Health Officers (N = 9); parents of birth to 2-year-olds; and Primary 1 teachers (N = 22) completed questionnaires. Crèche caregivers in Thimphu (N = 9), ECCD Centre facilitators (N = 9); Centre Management Committee secretaries (N = 9); health workers (N = 9), DEOs (N = 9) and District Health Officers were interviewed individually. Further, systematic observations of 59 ECCD centres were conducted.

The documentary analyses, survey, interviews and centre observations yielded a detailed snapshot of ECCD services in Bhutan. Survey data were analysed using statistical tests while interview data were analysed to generate themes. Gender and equity issues were key inquiry areas and reflected the data analysis, access and inclusion elements.

Key findings

1. ECCD-related policies in Bhutan are aligned to the Nurturing Care Framework.
2. A common understanding of ECCD and its benefits is not prevalent among stakeholders.
3. Access rates to centre-based ECCD remain low.
4. ECCD participation is positively associated with child outcomes as measured by parent report.
5. National data indicate a high prevalence rate of disability among young children.
6. Findings suggest that crèche caregivers and centre facilitators, and health workers want opportunities for targeted professional development.
7. Not all ECCD centres met national quality standards for ECCD centres.

Key recommendations

1. Implement a whole-system approach to ECCD through expedited cross-sectoral collaboration and multi-sectoral approach to enhance the ECCD system
2. Improve the quality of ECCD programmes through capacity development and better learning conditions
3. Increase access for all children to quality and equitable ECCD services
4. Ensure that all children have the best start in life through improved access to maternal and child health support
5. Promote and improve parenting education
6. Address the gap between ECCD planning and implementation
7. Continue to advocate for ECCD participation and development

1

Introduction

Background

The Kingdom of Bhutan is a relatively small land-locked country in South Asia. Its economy is based on agriculture and the country has experienced rapid economic growth in the past decades. Bhutan is paying much importance to Early Childhood Care and Development (ECCD).

The population of Bhutan is 735,553, excluding 8,408 non-Bhutanese/tourists, (Population and Housing Census, 2017, p. 10) and the number of children under-five years is estimated at 70,623 (National Statistics Bureau, 2017). The under-five mortality rate is 34.1 per 1,000 (Population and Housing Census, 2017) and the stunting rate for children aged under five years is 21.2% (National Nutrition Survey 2015). In 2018, the Gross Enrolment Rate in pre-primary and primary education were 25.3% and 101.8% (Annual Education Statistics, 2019). Secondary School completion rate is projected to be 18% in 2030.

ECCD in Bhutan takes an holistic approach:

> It encompasses services provided to children from 0-8 years old. ECCD programme consists of health, nutrition and parenting intervention for children aged 0-2 years old and the provision of organised early learning and stimulation programme for children aged 3-5 years old through centre-based ECCD programme, and formal schooling for children aged 6-8 years (pre-primary-grade II) (Wangchuk, Choden, Choden, & Zangpo, n.d.).

Effective ECCD service delivery thus requires the collaboration of a range of stakeholders: government departments at national, regional and local level, the private sector, international agencies, NGOs and families and communities. Departments with the greatest responsibility include the MoE and MoH.

The Royal Government of Bhutan follows a five-year socio-economic development planning cycle with Five Year Plans (FYP) articulating the socio-economic development priorities and programmes to be implemented. ECCD is a national priority in Bhutan and was first reflected in the 9th FYP (2002-2007; Planning Commission of Bhutan, 2001) which provided for the piloting of support mechanisms for ECCD (Figure 1).

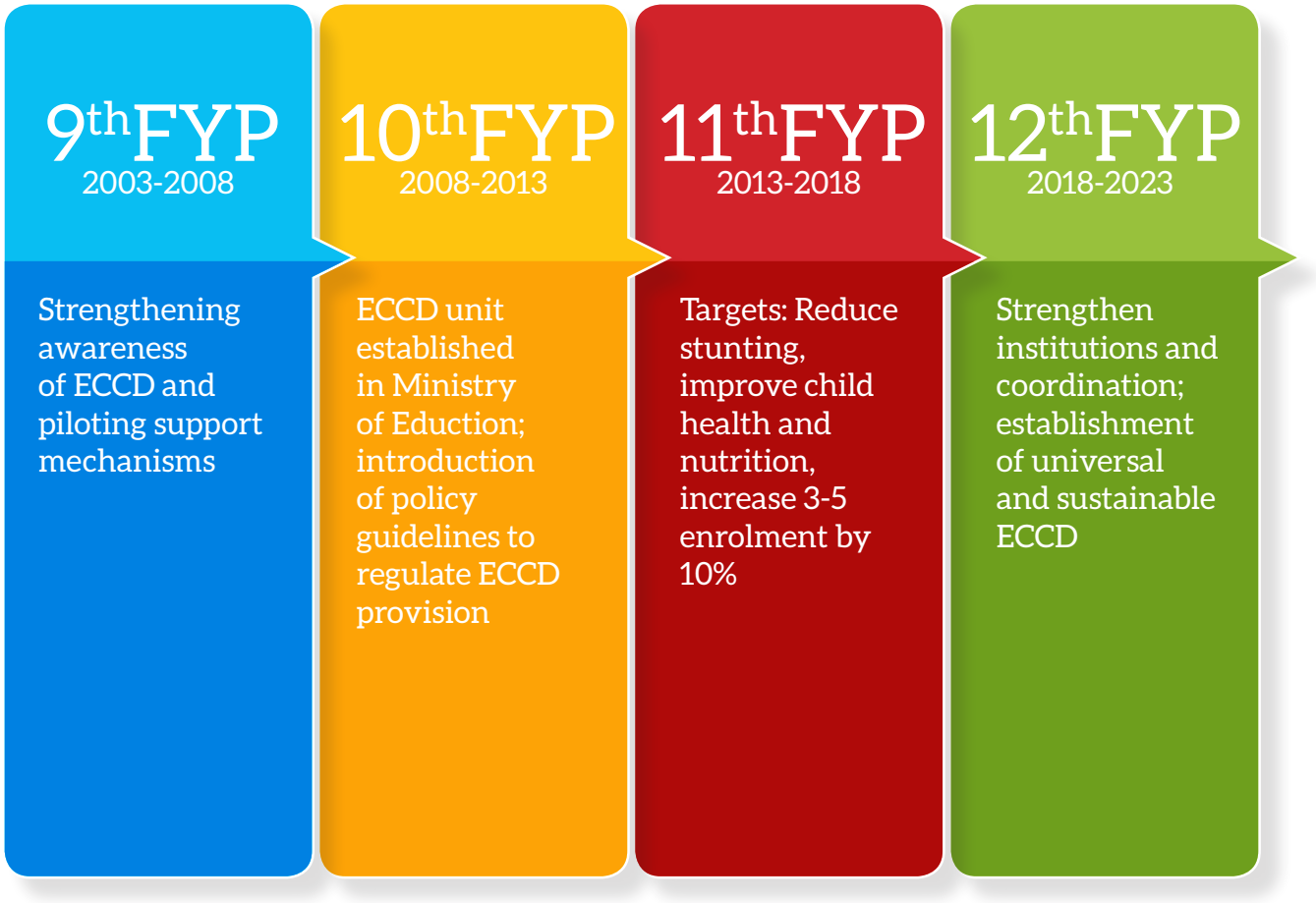


Figure 1 ECCD inclusion in recent Five Year Plans

Here, the need for a 'conducive and stimulating environment for enhancement of emotional, intellectual and physical development' during early childhood years was noted, as was the 'disappearing traditional childcare support' in urban areas with an increase in the number of working parents and the emergence of nuclear family (p. 41). The 10th FYP (2008-2012) included the establishment of an ECCD unit in the Department of School Education, putting in place an appropriately skilled core group of officials and teachers, regulating private provision, and drafting policy guidelines for support of ECCD. The 11th FYP (2013-2018) focused on quality of service provision and included: improving equitable access to services; greater emphasis on preventive and promotional measures; human resources development and the consolidation of health infrastructure. A key target was

reduction of stunting from 33.5% in 2010 to less than 30% by 2017-18, the development and strengthening of a national initiative for improving nutrition and micro-nutrient deficiencies as well as Integrated Management of Neonatal and Childhood Illnesses (IMNCI). The 12th FYP (2019-2023) focuses on strengthening institutions, systems and processes and streamlining service provision to harness synergies and maximise use of existing infrastructure.

FYPs are operationalised through a suite of laws, policies and action plans that include for example, the Child Care and Protection Act of 2011, the Draft National ECCD Policy, the Draft National Education Policy, the National Health Promotion Strategic Plan and the Bhutan Education Blueprint (2014-2024).

Evaluation Purpose

The ministry of education (MoE) and UNICEF Bhutan appointed The University of Hong Kong to provide consultancy services for an evaluation that assessed the relevance, effectiveness, efficiency, and sustainability of the provision of ECCD services in Bhutan. As such, it is not an assessment of ECCD services on child outcomes per se. The evaluation is entitled "An Evaluation of the Early Childhood Care and Development Programme in Bhutan", and focuses on the impact of ECCD services in achieving national objectives and global priorities specified in the Sustainable Development Goals for children from birth to six years. The coming years are of great importance for ECCD interventions in Bhutan, since Bhutan has committed to 50% ECCD coverage by 2024, and 100% coverage of ECCD by 2030.

The purpose of this evaluation was to:

- Assess the relevance, effectiveness, efficiency, and sustainability of the ECCD programme in achieving its desired objectives specified as national priorities in Bhutan's 11th and the ongoing 12th Five-Year-Plan (FYP), the Bhutan Education Blueprint 2014-2024, the Draft National ECCD Policy, the Draft National Education Policy, and global priorities as specified in the SDGs;
- Provide a set of actionable recommendations based on credible findings to enhance multi-sectoral coordination and inform the development of the National Multi-Sectoral ECCD Strategic Plan;
- Suggest innovative alternative and sustainable ECCD models for Bhutan; and
- Formulate systemic and strategic recommendations for strengthening ECCD programmes in the current Country Programme and Bhutan's 12th FYP.

Given the multi-sectoral nature of the ECCD Strategic Plan there are multiple relevant audiences for this evaluation, including the Royal Government of Bhutan, donor partners, UN agencies and other stakeholders and beneficiary communities.

Members of the Evaluation Reference Group played an important role in confirming the study design, data collection instruments, analysis of findings, and assistance with the development of appropriate and achievable recommendations. This was essential to ensure that evaluation of ECCD addresses ECCD priorities in the Kingdom of Bhutan.

Evaluation Objectives

The objectives of the evaluation were to:

- Construct a theory of change for ECCD programmes taking into consideration Bhutan's 12th FYP and future FYPs;
- Identify key factors that have contributed to the achievement or non-achievement of the intended results of the ECCD Programme;
- Understand how ECCD programmes were affected by cross-sectoral partnerships or lack of partnerships among key stakeholders including government, Care for Child Development, Ministry of Health, donors, Save the Children, Development Partners, UN agencies, other stakeholders and beneficiary communities;
- Assess how efficiently resources were utilised to meet national and local needs;
- Generate equity-focused recommendations for future quality improvement and increased access based on evaluation findings;
- Identify scaling-up options and ECCD financing models that will contribute to long-term sustainability of the programme; and
- Draw from lessons learned and best practices to recommend alternative ECCD models with specific attention to the most disadvantaged children and their families.
- Provide recommendations for the National Multi-Sectoral ECCD Strategic Action Plan;
- Address gender and equity dimensions and make recommendations on how gender and equity concerns can be further addressed in ECCD programming.

Evaluation Context

The Draft National Education Policy (2019) specifies the target age group of ECCD services from conception to eight years and ECCD services broadly fall into three age-group categories: birth to three years, 3 - 5 years, and 6 - 8 years.

Specifically with regard to ECCD, the National Education policy sets out eight policy statements (p. 4):

6.1 All children from 0 to eight years of age shall have access to ECCD programmes and services.
6.2 Home based parenting education and interventions shall be encouraged through awareness and advocacy programmes to cater to children from conception to 35 months of age to promote childcare, health, hygiene, nutrition, and stimulation.
6.3 The ministry shall provide early learning opportunities for children aged 36 to 71 months.
6.4 Interventions shall be instituted in primary schools to transition children aged 6-8 years from ECCD to primary school.
6.5 The establishment and operation of public, private, community and work place based Crèches and ECCD centres shall fulfil the prescribed standards and guidelines set by the MoE.
6.6 The MoE shall regulate the provision of ECCD education services.
6.7 ECCD centres must address the needs of all children aged 36 - 71 months and be inclusive of gender, disabilities, socioeconomic backgrounds, or location.
6.8 ECCD centres shall not collect any form of fee or contribution from students/families other than fees approved by the MoE.

ECCD services for children from birth to two years are provided in established health services for mothers and children, which include antenatal, new born and postnatal and child health care, by the MoH. Since 2014, the MoH has adopted the Care for Child Development (C4CD) programme to integrate early stimulation programmes through existing health facilities. In 2017 a pilot programme was launched to equip parents with knowledge and skills to stimulate the holistic development of children from birth to two years. This is important because involvement of parents in stimulation and development of children in this age group requires attention. Following extensive review of international tools the MoH, in collaboration with MoE and development partners, developed the screening tool – Bhutan Child Development Screening Tool (BCDST)- for early detection of developmental delays and disabilities which is now incorporated into the Mother and Child Health Handbook. These programmes come alongside improvements in young

children's outcomes – such as recent decreases in under-five and infant mortality rates. Nonetheless, around one in five children in Bhutan is stunted, highlighting the importance of further improving service coverage for young children.

ECCD services for 3 - 5-year-olds are largely associated with learning opportunities in centre-based programmes, as well as parenting education. The MoE has prioritised the expansion of ECCD centres; professional development of ECCD facilitators and key ECCD focal persons at all levels of management; supply of ECCD teaching and learning materials; and ECCD-related policy development and advocacy. Enrolment rates in ECCD centres have increased from just 3% in 2011 to 25.3% in 2019 (Annual Education Statistics, 2019). Although there are almost no gender differences in enrolment rates, Bhutan's mountainous terrain creates geographical barriers to access. Quality, equity, and sustainability are other key concerns to be addressed.

ECCD services for children aged 6 - 8 years are largely linked to primary schools. Primary school enrolment rates are high in Bhutan with a Gross Enrolment Ratio of 105.6% and a Net Enrolment Ratio of 92.9%. Minimal gender differences in enrolment are observed (ministry of education, 2018a). However, concerns remain over quality, including the quality of learning experiences and the condition of classroom environments.

Evaluation Scope

In 2008, the Royal Government of Bhutan established for the first time two pilot community ECCD centres in the country. In covering the ECCD programmes in Bhutan from inception to current status, this evaluation therefore focuses on the period from 2008 to 2019. The evaluation was not limited to centre-based ECCD programmes (for children aged 3 - 5 years), but as far as possible also evaluated other existing ECCD programmes for children from birth to six years. Bhutan's ECCD programme includes services for children from birth to eight years. This evaluation did not include children in this age range attending education programmes provided by monastic institutions, nunneries and centres catering to children of the armed forces.

The scope of this evaluation was also limited to birth to six years, which includes programmes and services from conception to transition to primary school. This evaluation was critical for informing the development of the National Multi-sectoral ECCD Strategic Plan, which will be based on a multi-sectoral approach. Additionally, the evaluation sets out to map the differing forms of ECCD services provided by different stakeholders and to assess functioning and effectiveness of existing coordination mechanisms.

The evaluation highlights best practices, gaps in planning, implementation, budgeting, and in coordination. It assesses the relevance, effectiveness, efficiency and sustainability of the programme in achieving its desired objectives specified as national priorities in

the current 12th FYP, the Bhutan Education Blueprint, the Draft National ECCD policy, the Draft National Education policy, and global priorities as specified in the SDGs. It proposes practical and contextualised recommendations for the National Multi-Sectoral Strategic Plan.

Geographically, the evaluation covers all three regions (Western, Eastern and Central) and includes three districts from each of the regions. The sample includes centres from rural, remote and urban locations, crèches, primary schools, health centres and mobile ECCD centres. The sampling strategy was approved by the National Statistics Bureau.

Evaluation Criteria

This evaluation assesses the relevance, effectiveness, efficiency and sustainability of ECCD programmes in Bhutan.

The specific evaluation criteria and questions are presented in Appendix A. The evaluation criteria included:

- **Relevance.** Relevance was evaluated on the extent of alignment with national and local priorities concerning ECCD at different levels in planning, documentation and implementation. Specifically, ECCD services was considered relevant if the objectives were reflected (a) in devising strategies and planning at both the national and dzongkhag levels, (b) in documenting policies and key documents, and (c) in implementing intervention programmes and service provision.
- **Effectiveness.** Evaluation of effectiveness of ECCD services was assessed on the basis of the extent to which intended outcomes towards national and local priorities were reached. (a) The evaluation team evaluated efforts within and across sectors to promote outcomes over time. (b) ECCD services were considered effective if outcomes were better for children participating compared with not participating, overall and for each group individually. The evaluation also took into account a variety of groups (including vulnerable groups such as those living in rural areas, or in areas with high rates of stunting). (c) Satisfaction with ECCD provision across geographical areas in Bhutan was also assessed; high satisfaction among caregivers with existing ECCD programmes indicates programmes are more effective. (d) The evaluation team identified areas that could be improved to enhance the effectiveness of ECCD services across sectors.
- **Efficiency.** Cost-effectiveness was evaluated by how resources and funding (internal and external sources) were deployed to support ECCD services for all children. High efficiency was indicated by appropriate and adequate allocation of resources (including finance, manpower) to support implementation of ECCD

programmes to achieve high quality and equity-focused results for children at the (a) national level across and within sectors, (b) *dzongkhag* level, and (c) centre level.

- **Sustainability.** Long term sustainability of ECCD services provision was evaluated in terms of finances, resources and environment. Services were deemed sustainable if long-term policies, funding sources, and work models that encourage continuation of quality service provision existed.

2

Economic imperative for early investment

A large body of research indicates that investing in the early years of a child's development has benefits for individuals, families, and nations. Three different strands of evidence have led to calls for increased government investment to support the early years of development. Research from neuroscience, economics, and developmental and evaluation sciences has demonstrated the cascading benefits of investing in early childhood development (ECD). This research has documented the malleability of early brain development (Center on the Developing Child at Harvard University, 2010), the higher economic returns of investment in early childhood compared with adulthood (Heckman, 2006), and the positive effects of early interventions on child development, school readiness and physical health (Britto et al., 2017; Campbell et al., 2014). Moreover, it has been demonstrated widely that participation in ECCD has as much, if not a more positive, influence on socioeconomically disadvantaged children when compared to their more advantaged peers (Burger, 2010; Wong, Harrison, Rivalland, & Whiteford, 2014). Participation in ECCD helps to counter the negative impacts of socioeconomic disadvantage and reduce inequality in children's outcomes. Therefore, investing in early learning and development opportunities has been lauded for yielding "exceptional returns", being a "powerful equalizer", and not leaving disadvantaged children "behind at the starting gate of school".

It should be noted that the case for investment in ECCD in Bhutan as a development, economic and social imperative, as well as the high costs of inaction, were clearly set out in a Ministry of Education and UNICEF joint publication entitled 'Early Childhood Care and Development: A case for investment'(MoE & UNICEF Bhutan, 2017).

3 Methodology

Ethical considerations

The evaluation was conducted in accordance with the UNEG Ethical Guidelines for Evaluation (2008), and UNICEF guidance on ethical concerns for conducting evaluations. Attention was paid in safeguarding the rights and integrity of those consulted and the confidentiality of their statements. The evaluation team ensured respect for differences relating to culture, religion, age, gender and these were considered in the interview protocols and discussion guides to each specific case, and with the help of national consultant and interpreter.

Full Human Research Ethics approval was obtained from The University of Hong Kong (Appendix C). The nature and implication of participation in the evaluation study was explained to all participants. Prior informed consent was obtained from all participants: parents/caregivers, crèche caregivers, health workers, ECCD facilitators, DEOs and DHOs. Documented voluntary approval was a prerequisite for their participation. Parent surveys were translated into *Dzongkha*, the national language of Bhutan.

The evaluation assured anonymity of all respondents involved. The confidentiality of the data and participants' anonymity (and that of their child, if applicable) was explained and no names have been used in this report. All personal identifiers were removed from the data for the purposes of analysis and electronically stored in password protected files.

Interview participants were assured that they were free to decline to answer any interview question. It was also explained to each participant that they were free to withdraw their consent at any time without negative consequences.

Enumerators and three enumerator supervisors were trained on the use of data collection instruments prior to data collection by members of the evaluation team and the in-country consultant. This training included the importance of obtaining informed participant consent and ongoing child assent for height and weight measurement. One enumerator supervisor was appointed to coordinate data collection in each region and to

conduct all face-to-face interviews. Supervisors received additional role-play-based training by members of the evaluation team and the in-country consultant. Additional training was provided by the in-country consultant to supervisors and enumerators on accurate measurement of child height and weight. Mid-way through the data collection process, refresher training of supervisors was conducted by the in-country consultant. Throughout the data collection process, UNICEF observers monitored data collection in the field.

Sample

The sampling frame was constructed utilising Population and Housing Census (National Statistics Bureau of Bhutan, 2017) and Annual Education Statistics (Ministry of Education, 2018a) data and was approved by Bhutan's National Statistics Bureau.

The sample was intended to represent children receiving services at community ECCD centres in Bhutan. It was clustered by ECCD centres, whereby ECCD centres were first selected, and then child/parent pairs were selected from each centre. In 2018, there were 340 ECCD centres in Bhutan (Ministry of Education, 2018a), with 282 government and 58 private ECCD centres.

The sample was stratified by region (Western, Eastern, and Central), and district. From the three regions, three districts were chosen using probability proportional to size (PPS). In each of these districts, a sampling frame was used based on data from the Ministry of Education detailing all community, mobile and workplace-based ECCD centres and number of children receiving services in each centre.

From each of the nine *dzongkhags*, six ECCD centres were randomly selected, with the probability of selection weighted to number of children receiving services, such that larger centres (with more children enrolled) had a higher chance of selection. Within each centre, five child/parent pairs were randomly selected (using unweighted probabilities). The weighting procedure to select ECCD centres was used to ensure that all child/parent pairs within each district had an equal chance of selection. Unweighted probabilities would have resulted in child/parent pairs in smaller centres having a higher chance of selection than those in larger centres. The sampling procedure resulted in 54 ECCD centres (including 51 community, 2 mobile, and 1 workplace-based ECCD centres) being selected (six from each district), and 270 parent/child pairs within each centre. Within each district, the sample was representative of children receiving services at community ECCD centres.

In addition, five parents of 3- to-5-year-old children who were not participating in ECCD (total 270 parents), were also randomly selected from the nearest town or village and invited to participate in the caregiver survey. Random sampling with replacement was used to ensure that at least ten parents of children with disabilities who are participating

in ECCD, and ten whose child was not participating, were included in the sample (total of 20 parents of children with disabilities).

Further, five private ECCD centres were selected. One private centre was randomly selected from each region, and two more were added based on stakeholder advice. Five parents from each centre were randomly selected. It is acknowledged that the sample of private ECCD centres was not representative.

All community, mobile, and workplace-based ECCD centres have a parent primary school (private ECCD centres do not), and these were included in the sample for data collection purposes. Further, within each district, ECCD centres were selected at random to sample the health care centre nearest to the ECCD centre (three from each district, total of 27 health care centres near ECCD centres). Additionally, a total of nine crèches in Thimphu were selected at random.

Overall, the target sample included 59 ECCD centres (51 community, two mobile, one workplace-based, five private), along with 54 parent primary schools, 27 health care centres, and nine crèches. Within these institutions, the target sample included 270 parents of birth to 2-year-olds attending health care centres, 270 parents of 3- to 5-year-olds attending community ECCD centres, 270 parents of 3- to 5-year-olds in nearby towns/villages who are not participating in ECCD, and 25 parents of 3- to 5-year-olds attending private ECCD centres.

All service providers in each of the 59 ECCD centres as well as the CMCs of the 59 centres were invited to participate in the survey. DEOs and DHOs of all 20 districts in Bhutan were also invited to participate in surveys.

A subsample of these participants were interviewed. A total of nine ECCD centres, three from each region, were randomly selected from the 54 ECCD centres (community, mobile and workplace-based) for an intensive study. In these nine ECCD centres, one facilitator and the CMC secretary were interviewed. Nine health care workers (one from a health centre near the selected ECCD centre) were interviewed. Nine District Education Officers (DEOs) and nine District Health Officers (DHOs) from the nine sampled districts were also interviewed. In addition, one randomly selected facilitator in each crèche was interviewed. Interviews were audio recorded, transcribed and analysed to generate themes.

A summary of the final participant sample is presented in **Table 1.**

Table 1 Participant Sample

	Caregiver	Child	ECCD centre	Centre Management Committee secretaries		Centre
	Surveys	Height & weight	Observations	Survey	Interview	Survey
Birth to 3-years	**270 caregivers** 27 health centres (3 Regions, 9 Districts)					
3 to 5 years, in ECCD	**295 caregivers** 59 ECCD centres (3 Regions, 9 Districts)	**295 children** 59 ECCD centres (3 Regions, 9 Districts)	**59 centres** (3 Regions, 9 Districts)	**22 CMC secretaries** (3 Regions, 9 Districts)	**9 CMC secretaries** 9 health centres (3 Regions, 9 Districts)	**100 facilitators** from ECCD centres (3 Regions, 9 Districts)
3 to 5 years, not in ECCD	**289 caregivers** (3 Regions, 9 Districts)	**289 children** (3 Regions, 9 Districts)				
6-years						

facilitators	Crèche caregivers	Health workers		Primary school teachers	DEOs & DHOs	
Interview	Interviews	Survey	Interviews	Survey	Survey	Interviews
	9 Crèche caregivers	**14 health care workers** (3 Regions, 9 Districts)	**9 Health care workers** 9 health centres (3 Regions, 9 Districts)		**15 DEOs** **9 DHOs**	**9 DEOs** (3 Regions, 9 districts) **9 DHOs** (3 Regions, 9 districts)
9 Centre facilitators 9 health centres (3 Regions, 9 Districts)						
				22 Pre-Primary Teachers 22 primary schools (3 Regions, 9 Districts)		

Primary data collection

Several tools were used to quantitatively evaluate progress in delivering ECCD services for children ranging in age from birth to six years.

Evaluating ECCD services for children from birth to 2 years

Given that service provision for birth to 2[1] years in Bhutan has been introduced with nationwide roll out of C4CD since 2014, and primarily focused on antenatal and postnatal services provided by the MoH, a quantitative survey was administered to healthcare workers and parents/caregivers to gather their views and experience on the relevance, effectiveness, efficiency and sustainability of services for children from birth to two years. This survey was developed to elicit respondents' overall experience of and satisfaction with ECCD service provision (Appendix B2). The parent/caregiver survey also included relevant items from UNICEF's Multiple Indicator Cluster Survey (MICS) and indicators from Bhutan Child Development Screening Tool (BCDST) to gather data on demographic and socioeconomic information about children's households and children's development. The survey for healthcare providers included items on the types and quality of provision of ECCD service – antenatal and postnatal services- in health facilities (Appendix B8).

The surveys were developed after a desk review of relevant documents to guide the construction of the survey questionnaire. The survey data complement the data gathered from the qualitative interviews by providing representative evidence on service providers' views. Further, given the additional focus in Bhutan on equipping parents of children aged from birth to two years with knowledge and skills to stimulate holistic development, a parent survey elicited parents' views on achievements and challenges related to their child's development.

In each of the nine districts, three health centres were randomly selected based on selected samples of ECCD centres, forming a total of 27 health centres. Ten parents of children from birth to two years were randomly selected from each health centre and invited to participate in the parent/caregiver survey, giving a total sample of 270 parents. All health workers from the 27 health centres were invited to participate in the healthcare workers' online survey.

Evaluating ECCD services for 3- to 5-year-olds

The data gathered for children aged 3- 5 years employed a different approach. Given the rapid increase in participation of 3- to 5-year-olds in ECCD centres in recent years, this

[1] ECCD is aimed at children from three to five years in Bhutan. However, policy documents at times refer to children aged from birth to three years, whereas in fact the age range to which they apply are birth to 35 months – that is, birth to age two.

evaluation provided a unique opportunity to compare the development of children who are participating in an ECCD centre with those who are not having this experience.

Caregiver survey

Parents/caregivers of the children enrolled in ECCD centres, and parents/caregivers of children not participating in ECCD centres were surveyed to compare child development (Appendix B3).

Incorporating items from the MICS, developed by UNICEF, the caregiver survey gathered demographic and socioeconomic information about children's households and children's development. Parents/caregivers were asked to report on their perceptions and use of ECCD services, and their satisfaction with ECCD services. The survey also includes items on home-based parenting practices and parenting styles developed with reference to the Parenting Education Curriculum (ministry of education & UNICEF, 2018).

Height and weight

The children of the surveyed parents/caregivers were measured for height and weight using standardised measurement tools by trained enumerators.

Online survey of pre-primary teachers

To gather additional data relevant to 6-year-olds, a survey of pre-primary teachers in the parent primary schools of the sampled community ECCD centres was conducted (Appendix B9). Here, teachers' views on school readiness and primary school transitions were elicited, including teachers' perceptions of differences between students who did or did not participate in ECCD. The survey was adapted in part from an existing survey regarding transitions to school and school readiness developed by Niklas, Cohrssen and colleagues (2018).

Online survey of facilitators, Centre Management Committees, health workers, DEOs, and DHOs

Data were collected by surveying the providers of ECCD services, including centre facilitators (Appendix B6), secretaries of CMC (Appendix B7), DEOs (Appendix B4) and DHOs (Appendix B5). The survey items aligned closely with our evaluation questions. The centre facilitator surveys included questions on their qualifications and professional development, beliefs and practices to promote ECCD, access to resources and facilities, and views towards ECCD services. CMC questionnaire contained questions on the structure and operation of centres, including centre management, children and staff composition (children to facilitator ratio), facilitator qualification and professional development, and support for disadvantaged communities, resources and facilities.

An online survey for secretaries of ECCD CMC was created to collect data on perceptions of programme quality offered at ECCD centres based on an adaption of an Early Childhood Facility Survey developed by Rao et al. (2016) for UNICEF Papua New Guinea (PNG) with reference to goals stipulated in local policy documents. The survey included items related to the environment with reference to the minimum operating standards for ECCD centres. The DEO online survey included items tapping district-level expenditure, types of ECCD programmes offered, and information on enrolment and participation of ECCD programmes.

Centre observation protocol

In addition, enumerators visited the 59 participating ECCD centres and completed an observation protocol. The observation protocol was adapted from the Interview Guide of an Early Childhood Facility Survey developed by Rao et al. (2016) for UNICEF Papua New Guinea (Appendix B1). The observation protocol included different aspects of centres, including surroundings, building, water, sanitation and hygiene (WASH) facilities, play area, hazards, covered space and materials.

Stakeholders were surveyed and individual interviews were conducted to gather in–depth information about respondents' views. Interviewees were asked to elaborate their responses in the survey by providing more details and examples of their perceptions of ECCD services (see Appendices B10 to B15). Questions regarding their experience with and views of their ECCD coordination with other sectors were asked. DEOs and DHOs from the selected districts were also interviewed on district-level expenditure and ECCD programmes.

Broadly, interviews and surveys allowed the evaluation team to cross-check findings across multiple sources. A comparison of the interview findings with insights from global best practices was made to bring in global expertise and solutions.

The list of items in the measures are presented in **Appendix B.**

4

Findings: Document analysis

ECCD development context and challenges in Bhutan

Early childhood care and development (ECCD) in Bhutan is guided by the philosophy of Gross National Happiness to "Maximize the happiness of all Bhutanese and to enable them to achieve their full and innate potential as human being." (Planning Commission, RGoB, 1999, p.47).

The Draft National ECCD Policy of 2011 (ministry of education, 2011) defines ECCD as:

> Encompassing all the essential supports that a young child needs to survive and thrive in life, as well as the supports a family and community need to promote children's holistic development. This includes integrating health, nutrition and intellectual stimulation, providing the opportunities for exploration and active learning, as well as providing the social and emotional care and nurturing that a child needs in order to realize her/his human potential and play an active role in her/his family and society (ministry of education, 2011, p. 14).

Early childhood covers the age range 0 (i.e. conception) to eight years and the ECCD programme consists of:

> health, nutrition and parenting intervention for children aged 0-2 years old and the provision of organised early learning and stimulation programme for children aged 3-5 years old through centre-based ECCD programme, and formal schooling for children aged 6-8 years (pre-primary-grade II) (Wangchuk et al, n.d., p. 3).

Effective ECCD service delivery therefore involves the working together of a range of stakeholders: government departments at national, regional and local level, the private sector, international agencies, NGOs and families and communities. Ministries with the greatest responsibility include the MoE and MoH. While improved health and nutrition in the early years are recognised as crucial for wellbeing, the key rationale for supporting early development provided in official documents is to improve child development and schooling performance (e.g., Education Sector Review Commission, 2008; Ministry of Education, 2008; Gross National Happiness Commission, 2019). Indeed, ECCD-related policies appears to be aligned with the Nurturing Care Framework proposed by the **Lancet** Series on Advancing Early Childhood Development. The **Lancet** series stressed the importance of interventions that integrate nurturing care and protection in promoting child development in the early years (Britto et al., 2017). As defined by the World Health Organization, "Nurturing care refers to conditions created by public policies, programmes and services." These conditions enable communities and caregivers to ensure children's good health and nutrition, and protect them from threats. Nurturing care also means "giving young children opportunities for early learning, through interactions that are responsive and emotionally supportive" (World Health Organization, 2018, p. 2). A consortium of influential international non-governmental organisations has recommended that the Nurturing Care Framework include specific guiding principles, strategic actions, and methods to monitor the implementation progress of governments (World Health Organization, 2018). The Nurturing Care Framework consists of five important components: Good Health, Adequate Nutrition, Responsive Caregiving, Security and Safety, and Opportunities for Early Learning.

Legislative and Policy Framework

The Royal Government of Bhutan (RGOB) follows a five-year socio-economic development planning cycle with Five Year Plans (FYP) articulating the socio-economic development priorities and programmes to be implemented over a five-year period. ECCD was first reflected in the 9th FYP (2002-2007; Gross National Happiness Commission, 2001) which provided for piloting of support mechanisms for ECCD noting the need for a "conducive and stimulating environment for enhancement of emotional, intellectual and physical development" during early childhood years amid the "disappearing traditional childcare support" in urban areas with more working parents and the emergence of the nuclear family (Gross National Happiness Commission, 2001:41). Initially, the focus was on strengthening awareness to improve childrearing practices and then during the 10th FYP (2008-2012; Gross National Happiness Commission, 2009) on establishing an ECCD unit in the Department of School Education, putting in place an appropriately skilled core

group of officials and teachers, regulating private provision and drafting policy guidelines for support of ECCD.

The 11th FYP (2013-2018; Gross National Happiness Commission, 2013) focused on improving the quality of services. For the health sector the key areas were: improving access to equitable services; greater emphasis on preventive and promotional measures; human resources development; and consolidation of health infrastructure. Particular ECCD related areas were reducing stunting from 33.5% in 2010 to less than 30% by 2017-18, and the development and strengthening of a national initiative for improving nutrition and micro- nutrient deficiencies as well as Integrated Management of Neonatal and Childhood Illnesses (IMNCI).

ECCD related objectives of the education sector in the 11th FYP were to ensure quality of education service delivery sustainability; and achieve the Millennium Development Goals (MDGs). Strategies included targeted intervention programmes, enhancing professional development for teachers, improved service delivery and promoting private participation. Special education (SEN) services were to be strengthened to improve access to schools and ECCD programmes provided to better prepare new primary school entrants. Increasing enrolment by 10% and centres from 96 to 300 were targets.

The 12th FYP (2018-2023; Gross National Happiness Commission, 2019) focuses on strengthening institutions, systems and processes and streamlining and coordination to avoid overlaps and duplication, harnessing synergies and maximising use of existing infrastructure. These are extremely pertinent to developing a sustainable ECCD system given the challenges of enhancing the quality of services against the background of rapid service expansion.

Maternal and child health policy

The National Health Policy (n.d.a) provides for a comprehensive approach to primary health care, aimed at providing universal access with emphasis on disease prevention, health promotion, community participation and intersectoral collaboration. Health services are provided through a tiered health system with Outreach Clinics and Basic Health Units at the primary level, District Hospitals at secondary level and the Regional Referral Hospitals to National Referral Hospitals at tertiary level. Primary health care reaches out to communities through Village Health Workers (VHWs). Health services for vulnerable and at risk groups, as well as hard to reach populations such as nomadic groups, are mandated in this policy.

ECCD related aspects of recent health plans include:

The Bhutan Every Newborn Action Plan (BENAP; ministry of health, n.d.b) aims to reduce newborn deaths to 13.2 per 1000 live births and stillbirths to 12.1 per 1000 live

births by 2023, with a view to reducing the Neonatal Mortality Rate and still births below 12 by 2030, in line with targets of Global Strategy and Sustainable Development Goal 3 (SDG-3; United Nations, 2015). There are six intervention packages: pre-conception and antenatal care; care during labour and childbirth; immediate postnatal newborn care; care of healthy newborn; care of small and sick newborn; and care beyond newborn survival.

The recent National Health Promotion Strategic Plan 2015-2023 (ministry of health, 2015a) is built on five pillars:

1. Health in all policies
2. Capacity building
3. Healthy settings (includes schools, cities/towns/villages, and health institutes)
4. Targeted interventions for priority health concerns
5. Innovation for sustainability

Among priority health concerns of particular significance for ECCD is the focus on addressing under-nutrition in infants, children (especially those under five years), adolescent girls and pregnant women, and addressing water and sanitation issues. Key actions identified are a multisectoral approach to create a supportive environment and community-based interventions to address malnutrition supported by education and communication. The MoE is charged with elevating the current school health programme to help achieve a number of these aims.

Water and sanitation are key areas to be addressed to reduce the burden of diarrhoeal diseases with the MoE playing a role in educating parents as well as ensuring schools are healthy environments.

Health plans and policy documents largely focus on the determinants of physical health of young children. To this end, the C4CD programme integrates early stimulation programmes into existing health facilities. This provides information on supportive feeding and stimulation for children from birth to three years (UNICEF, 2019). The 2019 Maternal and Child Health Book, along with pregnancy and postnatal information, growth monitoring and immunisation, provides for developmental screening at 10, 14, 18 weeks, six months, nine months, 12 months, 18 months and then each year to five years. In addition, it includes basic child stimulation messaging from the C4CD Manual (ministry of health, 2014).

Child care and protection

Dimensions of child protection include protection from violence, abuse and neglect and exploitation including treatment of children in difficult circumstances. The Child Care and Protection Act of 2011 covers from birth to 18 years. Provisions with general relevance for ECCD-related policy and implementation, apart from the core principles of the

best interests of the child and non-discrimination, include the requirement that education institutions take measures to care and protect the child and work with families and communities to promote understanding of children. The Government is required to take measures and develop programmes to:

> ...provide families with the opportunity to learn about parental roles and obligations with regard to child development and child care, promoting positive parent-child relationships, sensitising parents about the problems of children and encouraging their involvement and promote community based activities (Chapter 3:35).

While the recent study of violence against children in Bhutan (National Commission for Women and Children, Royal Government of Bhutan, & UNICEF Bhutan, 2016) does not focus on young children specifically, it draws attention to the widespread use of corporal punishment and Article 214 of the Child Care and Protection Act (CCPA) specifically prohibits harsh and degrading punishment or correction at home or school or in any institution.

A key indicator of child protection is birth registration. Due to cultural practices around naming children, which does not take place immediately after birth, maternal and child health handbooks issued at birth are a temporary substitute though they do not replace registration with the Department of Civil Registration and Census. Most registrations take place at the free annual census at all the *gewogs* in all 20 *dzongkhags* (National Commission for Women and Children & UNICEF, 2016).

Education

The Bhutan Education Blueprint (2014-2024), developed to guide comprehensive transformation of the education system also containes the ECCD goals, which is presented in **Table 2.** Here, Bhutan's strategic efforts to turn the system around and to accelerate progress towards achieving SDGs are set out.

Table 2 Bhutan Education Blueprint ECCD goals

Wave 1 **2014-2017** **System turn-around**	**Wave 2** **2018-2020** **Accelerate system improvement**	**Wave 3** **2021-2024** **Move towards Excellence**
ECCD programmes reinforced through advocacy		Access to quality ECCD enhanced
Number of ECCD centres/schools increased (especially in rural areas)		
NELDS for ECCD implemented and monitored	Implementation of NELDS for ECCD strengthened	NELDS for ECCD achieved by all centres
16% GER achieved	29% GER achieved	50% GER

The Draft National ECCD Policy (ministry of education, 2011) was endorsed by the MoE in 2010 but was thereafter shelved as ECCD-related provisions were included in the Draft National Education Policy (2019). However, given the interconnectedness of early learning and development, this highlights the need for an integrated multi-sectoral National ECCD Policy to ensure a coordinated national approach to optimise child health, child protection and early learning.

Section 6 of the Draft National Education Policy (2019) indicates that ECCD covers all children from birth to eight years (with specific mention of children with SEN). ECCD programmes and services are seen as providing strong foundations for learning, lifelong development and a smooth transition from early childhood education to school. Key policy statements include:

- From conception to 35 months, home based parenting education and interventions shall be encouraged through awareness and advocacy programmes to promote childcare, health, hygiene, nutrition, and stimulation.
- From 36 to 71 months, the ministry shall provide early learning opportunities for children.
- From 6 to 8 years, interventions shall be instituted in primary schools to transition children from ECCD to primary school.

The MoE is responsible for regulating provision of ECCD education services and all public, private, community and workplace-based crèches, and ECCD centres must meet prescribed standards and guidelines. Approval of any contributions made to community-based ECCD centres by students/families takes place at Centre Management Committee level.

The policy has a strong equity requirement that ECCD centres are inclusive of gender, disabilities, socioeconomic backgrounds, or location and address the needs of all children. More recently, Standards for Inclusive Education (ministry of education, 2017) have been developed which detail the culture, policies and teaching and staffing practices necessary to support inclusion. These include links with health specialists and child protection issues as well as support for and partnership with parents.

School education is free and compulsory in Bhutan from age six to 16 years. The draft policy has a number of specifications for facilitating enrolment of out of school children, and considerations for schools in exceptional circumstances such as remoteness, high altitude and low socioeconomic communities. There is provision for children with SEN to have support with specialised, appropriate services and trained personnel.

The policy has a focus on supporting the health and wellbeing of children including safety and protection standards, health and nutrition education, provision of school feeding and periodic health monitoring of learners.

A number of human resources provisions (Section 14) are aimed at providing adequate, competent human resources for the system including training and ongoing professional development, specifying workloads, and incentivising staff and providing clear career pathways, advancement opportunities and specialisation choices.

Educational Administration and Governance (Section 16) follows a decentralised model with the MoE responsible for policy guidelines and overall coordination. Service delivery planning, budgeting, implementation and monitoring are managed at *Dzongkhag/Thromde* level, which is also responsible for community engagement and parenting awareness programmes.

Strategies to promote ECCD include:

- Advocacy and social mobilisation to improve child care practices and promote quality of programmes and services.
- Promoting and facilitating establishment of public, private and community- based ECCD centres which meet the Operational Guidelines to ensure minimum standards.

- Ensuring quality by the MoE approving, monitoring and regulating all ECCD services. The National Early Learning and Development Standards (NELDS) is the guiding document for developing curriculum, parenting education and training.
- Building capacity of key stakeholders such as parents, caregivers, ECCD facilitators, health workers, teachers and ECCD leaders to deliver quality ECCD. The Paro College of Education, Royal University of Bhutan, is responsible for developing and providing courses in ECCD for professionals, the courses must also integrate ECCD components in both pre-service and in-service training curricula of education and health professionals to develop expertise in ECCD.
- Promoting collaboration and coordination among various ECCD stakeholders to enhance effectiveness of programmes and services and avoiding duplication.
- Promoting and conducting research to assess the effectiveness, relevance and efficiency of various programmes and services.

Constituting a National Steering Committee is mandated to support multi-sectoral leadership, Co-Chaired by the MoE and MoH, the committee members include GNH, MoF, NCWC, Royal University of Bhutan, Royal Education Council (REC), an International NGO member, a local NGO member and a private sector member. The Division of ECCD and SEN is mandated as the "nodal agency for formulating, planning, coordinating, monitoring and supporting ECCD programmes and services" (ministry of education, 2011, p.8). However, recent agreements have been reached that MoE is the coordinating agency for ECCD, and Technical and Steering committees are currently being established.

Situation analysis of young children and ECCD services in Bhutan

Child population and indicator overview

In 2017, Bhutan had 57,474 children under four years, and 62,991 children aged five to nine years according to the Population and Housing Census (National Statistics Bureau of Bhutan, 2018). The projected population of children aged 3 - 5 years is 42,676 in 2024 and 37,837 in 2030. In 2018, 8,499 children were enrolled in ECCDs. Bhutan has committed to increase ECCD coverage to 50 % by 2024 and to 100 % by 2030, the SDG target.

Key child and service access indicators are summarised below in Table 3. As might be expected, poverty is associated with poorer outcomes for many of the indicators.

A child multi-dimensional poverty index (CMPI) comprising 12 indicators- two health

(child mortality and food security); one education (investment in cognitive skills and school attendance); eight living standards (electricity, sanitation, water, housing material, cooking fuel, assets, land ownership and livestock ownership); and one childhood condition (which for the ECCD ages was stunting)- was designed to monitor child poverty and track SDG target 1.2, which aims at halving child poverty in all its dimensions by 2030 (Alkire, Dorji, Gyeltshen, & Minten, 2016). The study investigated children from birth to 18 years, based on 2010 data. According to the study, 34% of children were multi-dimensionally poor with no gender differences with the rates highest among children between three to five years. Data also showed that 44% of rural children were poor while 10.8% children in urban areas were poor. In the lowest quintile 64.6% were poor. The poverty rate among children living in households where the head has at least completed secondary school is almost four times lower than among children living in households where the head has no education (11.7% vs. 41.7%).

Poverty is a major cause of school dropout and non-enrolment. While there is almost universal primary school enrolment, late enrolment is common: the 2017 Situation Analysis reports that at age six, 21% of girls and 18% of boys were out of school (UNICEF, 2019). While education is free there are costs for school uniforms, transport, token contributions and stationery (ministry of education, n.d.). Where required (in poor communities or schools where children have to walk long distances or board), the government provides free meals through the Food for Education Program. A further reason for lack of enrolment is inaccessibility in rough mountainous terrain and the need to walk long distances. This may well be a factor in late enrolment of younger children. Extended Classrooms introduced in the 10th FYP have helped enrol children and in 2017 the adjusted Net Primary Enrolment was 95.7% (ministry of education, 2018b).

Table 3 Key ECCD Indicators for Children 0 to 8 years in Bhutan

Sector	Indicator	2010- 2012	2016 -2018	SDG Goal 2030
Health				
Maternal and Child Health indicators	Maternal Mortality Rate /100,000		89 [a]	<70
	Neonatal Mortality rate /1000	21[a g]		<12
	Infant Mortality rate/1000	30 [g]	15 [e]	
	Under-5 Mortality rate/1000	37.3[g]	34.1[e]	<25
	Immunisation coverage %	91[b]	94 [a]	
	Underweight children <5 years of age %	12.7[b]	9[c]	
	Low birth weight %	9.9 [b]	6.8[c]	
	Stunting <5 years %	33.5 [b]	21.2[c]	
	Anaemia <5 years		43.8 [c]	
	Exclusive breastfeeding <6 months		51.4 [c]	
Service indicators	Antenatal visits ≥ 4		85[c]	
	Birth attended by professional		97.2 [e]	
	Vitamin A administered in last 6 months %	45 [b]	87[a]	
	Deworming in last 6 months %		89[a]	
Infrastructure				
Service indicators	Access to improved drinking water sources %	88 [a]	98 [a]	Universal access by 2030 SDG 6
	Access to improved sanitation facility		74.8[a]	
Child Protection				
Service indicator	Birth registration/child health card %		99.9[d]	
Education				
Service indicators	ECCD Enrolment 3 – 5 years %	9[d]	21.8[d]	100
	ECCD centres, including community, work-place based, and private centres (n)		2018: 340 (8499 children)[h]	
	Primary 6 – 14 GER%		98.8[e]	100
	PP enrolment at 6 years %	68.1[f]	63.4[h]	100

Sources: [a] Annual Health Bulletin 2019 [b] Bhutan Multi-Indicator Survey (BMIS) 2010 [c] National Nutrition Survey 2015 [d] UNICEF Situation Analysis 2019 [e] 2017 Population and Housing Census [f] UNICEF Situation Analysis 2012 [g] Bhutan National Survey 2012 [h] Annual Education Statistics 2018

Children with disabilities

The 11th FYP included a National Key Results Area (NKRA): **Needs of Vulnerable Groups Addressed.** The 2016 GNH Commission's vulnerability baseline assessment (Gross National Health Commission, n.d.) identifies children with disabilities as a vulnerable group.

The prevalence of any disability among children aged two to nine years, based on identifying difficulty in at least one functional domain, is 21%. The prevalence of mild disability is about 19%, and moderate or severe 2.7%. The most prevalent form of disability at 15% is cognitive, followed by behavioural (5.6%) and motor (5.5%). Disability prevalence is highest at 27% for children aged two to five years, and there are no gender differences. Disability is significantly higher in poor children at 26% for the lowest wealth quintile compared to 14% for the highest quintile. Children whose mothers had no education were almost twice as likely to have a moderate or severe disability compared to children with mothers with primary or secondary education. In parallel, the probability of having a mild disability was not as affected. This implies that programmes aimed at improving maternal education and parenting education could have a significant impact on preventing children's conditions from worsening (National Statistics Bureau, 2012).

Children with disabilities, and their families, may experience a range of barriers to learning and development that include inadequate legislation and policies. They may also experience difficulties in accessing ECCD centres – both indoor and outdoor environments (World Health Organization & UNICEF, 2012). The MoE follows an integration and differentiation education model with separate specialised schools for visual and hearing impaired. Schools for children with SEN in Bhutan are attended by children with disabilities and children without disabilities, although they attend separate classes; however, disability is a major reason for non-enrolment in primary school. The vulnerability baseline study indicated:

- Teachers did not feel trained and equipped to teach children with SEN and infrastructure was inadequate;
- Absence of a strong, multisectoral ECCD system created a gap in early identification of children with disabilities;
- There was limited availability of therapists to help prevent secondary handicaps associated with a primary disability and to reduce the impact of disability;
- District hospitals offered rehabilitation services, primarily physiotherapy, but there was little capacity for speech and occupational therapy, child psychology or counselling. Screening and referral mechanisms for children with disabilities also required strengthening;

- There was no specific legal framework specifying what children with disabilities are entitled to in terms of access to education and quality of education;
- There is a lack of resource teachers (special educators) who can support teachers in adapting the curriculum and their pedagogy to suit the needs of children with SEN.

Progress is being made: a plan is under development to implement the new National Policy on Persons with Disabilities that was endorsed by the Government in August 2019, and as of 2019, there were 19 schools with SEN Programme and two specialised institutes (Annual Education Statistics, 2019).

Maternal and child health and nutrition services

As can be seen in Table 3, substantial progress has been made with regard to maternal and child health and nutrition (UNICEF, 2013, 2019). Bhutan has met the Millennium Development Goals (MDGs) on reducing poverty (MDG1), halving underweight (MDG1), child mortality (MDG4) and maternal mortality (MDG5). The majority of women received four or more antenatal care (ANC) visits and are attended by a skilled birth attendant. New born deaths constitute the major proportion of infant mortality. BENAP has provided capacity building for care of new-borns and provides for postnatal home visits. Immunisation for childhood diseases is at a high at 94%.

No gender differences are found in nutrition status, infant and young child feeding practices, child care, health-seeking behaviours and immunisation (Ministry of Health, 2012, 2015b). While stunting reduced to 21.2% in 2015 and the prevalence of anaemia in children under five years fell by nearly half from 81% between 2003 and 2015, these remain significant problems. Stunting remains highest among poor and rural children.

Poor infant and child feeding practices contribute to these problems. There is low exclusive breastfeeding for children's first six months and diets of about 85% of children under two years are insufficiently diverse. Poor sanitation contributes to nutritional deficiencies. Access to safe drinking water is high but access to safely-managed improved sanitation, critical to achieving SDG 6, is not.

The RGoB initiatives to improve nutrition of young children include: growth monitoring and counselling programmes; Vitamin A and de-worming supplementation; Care for Child Development and IMNCI programmes; immunisation programmes for children up to age two years and beyond; and awareness programmes and IYCF counselling at hospitals, Basic Health Units and Outreach Clinics. Micronutrient supplementation is promoted for pregnant and post-delivery women. Six months maternity leave and workplace crèches for civil servants are other initiatives by the ministry in support of good nutrition.

A critical requirement in improving nutrition is strengthening the multi-sectoral approach, focused on the first 1,000 days, and enhancing coordination among stakeholders.

A multi-sectoral action plan for nutrition has been endorsed and coordination processes established. However, information regarding efficiency of nutrition-specific and nutrition-sensitive interventions and coordination and management of programmes is not available for analysis.

Strengthening capacity for public health and nutrition will be critical. The 12th FYP notes continuing challenges despite considerable gains. These challenges include infrastructure, human resource shortages and sustaining increasing health sector expenditure. NKRAs focus on upgrading skills of health workers and ensuring adequate need-based deployment, strengthening tertiary health care and referral systems, strengthening local level health care services and facilities and automated digital information systems. In addition, the 2017 Situation Analysis (UNICEF, 2019) notes the need for increasing demand for health services particularly by lowest income, least educated women who rely more on traditional healers.

ECCD: Early learning and stimulation

An ECCD and SEN Division under the MoE, Department of School Education, was established to support child development and the transition to primary education. The ECCD programmes and services available in Bhutan are set out below (Wangchuk et al., n.d.).

ECCD for children from birth to two years

The ECCD programmes and services provided to children in this category are primarily health, nutritional and child care interventions. The main service providers are the MoH and community-based ECCD centres through the ECCD Parenting Curriculum and Non-Formal Education Programme (NFE). However, noting that the policy indicates that very young children will be cared for at home or informally, early stimulation opportunities for children from birth to two years present opportunities for further development.

Existing programmes include:

- The NFE adult literacy programme for any person who did not attend school. Most of those enrolled are women. There is a year-long Basic Literacy Course followed by a nine-month Post Literacy Course which includes life skills content and, from the 9th FYP, child development content (health, nutrition, stimulation).
- There is little formal childcare for this age group though some NGOs have established crèches for children under three years. Draft NCWC guidelines for workplace child care refer to children from birth (NCWC, 2014), indicating demand for childcare from working mothers.

- Limited pre-service training for health workers is provided by the Faculty of Nursing and Public Health (FNPH). The training appears to be exclusively health-focused rather than taking a more holistic view of early development. In addition, there are basic ECCD components in the paediatric nursing diploma and Bachelor of Science (Nursing and Midwifery) as well as one component entitled 'Child Health' in a certificate course for assistant nurses and basic health workers (Wangchuk et al., n.d.).

ECCD for children aged three to five years

In 2016, 80% of ECCD programmes were free RGoB and donor-provided community-based centres and approximately 20% of ECCD centres were privately owned. Private enrolment was stabilising due to limited opportunities for market expansion and community-based ECCD centres were growing in number by 30 to 40 each year. Nevertheless, more than 80% of children did not access ECCD centres in 2016.

According to the Annual Education Statistics 2018 there were 340 ECCD centres comprising 282 community centres and 58 centres established by private providers and Non-Government Organisations. In the same year, a study on access to ECCD among rural poor populations of children aged from 3- 6 years, in the four *Thromdes* (Thimphu, Phuentsholing, S/Jongkhar and Gelephu), found that only 1,822 of 10,345 children were enrolled in ECCD programmes (ministry of education, RGoB, & Save the Children Bhutan, 2018).

ECCD programmes provided to children aged three to five years are primarily focused on early learning and stimulation. The service providers in this category are:

- The MoE, which provides community-based ECCD centres. This is a free service and also offers parenting education on ECCD to parents of children enrolled. Facilitators' salaries are paid by the RGoB.
- In scattered rural communities, mobile community-based centres provide the programme. The mobile ECCD facilitator programme was piloted in 2018 and expanded in 2019. Here, the facilitator works in two or three smaller locations within the catchment community, dedicating two or three days a week in each of the constituent villages. Parents provide the programme for up to three hours a day in the other villages. A parenting programme was initiated in 2010 and reviewed and revised during 2017 and 2018, prior to Parenting Education being rolled out nationwide in 2019, based on a revised version of the "National Parenting Education Manual." The programme is offered to parents in one three-hour session a month.
- Non-governmental organisations (Save the Children, Loden Foundation, and Tarayana Foundation) have established some ECCD centres targeting poor communities.

- There are a large number of private day care centres concentrated in urban areas which charge fees and therefore cater to children from higher income families.
- The RGoB has also encouraged corporate entities to set up workplace-based centres for children of their employees. According to the Operational Guidelines issued by the MoE, these centres may not admit fee paying children (ministry of education, 2018e).

Extremely wide variations in provision of ECCD programmes are found by district, with greater provision in more urbanised areas. The RGoB, with UNICEF support, has committed to expanding a network of community-based ECCD centres, particularly in the most remote and vulnerable communities.

ECCD for children aged six to eight years

The official age for school admission in Bhutan is six years. The children in this age group are in the formal school system. Education providers are public and private primary schools. Enrolment is close to universal but in 2018, about 3.2% or close to 2,840 primary age children (6-12 years old) were still out of school or were not enrolled in any form of structured learning. This group of children is assumed to be those in remote and hard-to reach areas, children of nomadic communities and migrant population, children with learning disabilities whose special learning needs are currently not catered to, and those who have dropped out of schools.

The General Education Curriculum includes one year of pre-primary as well as Classes I to VI. However, the pre-primary year has a formal schooling rather than a developmental focus (Education Sector Review Commission, 2008). The 2008 Education Review Commission suggested keeping 3- 6-years out of the formal education sphere, with mandatory enrolment for 5 and 6-year-olds in order to enrol in Class I. Conversely, the Bhutan Education Blueprint 2014-2024, found that 56.5% of the public surveyed suggested five years as the appropriate entry age for pre-primary. This indicates a growing interest from parents for some form of educational service for younger children and probably that a free public service would increase access.

Child development and education outcomes

In 2010, the BMIS study measured children aged 36 to 59 months on the Early Childhood Development Index (ECDI). The ECDI assesses children on items in four domains: literacy, physical, social-emotional and learning. On a scale of 1 to 100, the ECDI for children in Bhutan was found to be only 71.5 overall, with minimal gender differences. Generally, children scored high on physical, social and learning items but very low on literacy and numeracy items. The ECDI was highest among urban children, richer children, those

whose mothers were literate, and those whose parents had secondary-level education or higher. Children who had attended an ECCD service scored 79 on literacy and numeracy compared to only 18.8 among those not in preschool. ECDI was higher for children with overall adequate support for learning from parents. Yet, even among those children who receive support for learning, only 35% were on track regarding literacy and numeracy skills (i.e., passed two of three items) (UNICEF, 2018).

More recently, Save the Children undertook a comprehensive study of the outcomes of 1,189 children in different forms of ECCD provision. The study included children enrolled in community-based, corporate, private and civil society organisation (CSO) ECCD centres and children of parents who participated in NFE parenting courses as well as children with no ECCD exposure (Pisani et al., 2017). Children who attended centre-based programmes gained significantly more than children who were not attending an ECCD centre. Children enrolled in private centres had significantly higher scores than children in other study groups at baseline and maintained higher average scores at end-line. However, there were no significant differences between the gains made by children attending community and CSO ECCD centres and those in private centres. Children in community and CSO ECCD centres gained significantly more than children in NFE parenting and no ECCD groups.

Children in higher quality classes (rated on the ECERS-R) and those with higher adult child ratios had higher scores than children in larger, lower quality classrooms. Baseline data shows that home learning activities are significantly positively related to children's early skills for children not attending ECCD centres. In addition, children at ECCD centres whose parents stimulate them at home gain more than children who have less home stimulation.

The implication of this study, which confirms studies elsewhere (e.g. Burchinal, Zazlow & Tarullo, 2016; Lipsey, Farran & Hofer, 2015; Rao et al, 2014) is the critical importance of focusing on ECCD quality as well as expansion. It also confirms that children from poorer families have significantly weaker learning and development than children from wealthier families (and this links to the rural/urban divide) at baseline and end-line. Therefore, in a phased scale-up, poor rural children should be the immediate target. While findings on the importance of interactive learning activities and the reduction of negative discipline at home indicate the need to invest in parenting programmes, the current NFE parenting programme did not deliver substantial gains and very few parents actually attended, indicating the need to redesign the programme if it is to be effective. The 2017 Situation Analysis (UNICEF, 2019) reports that many parents do not have adequate time (usually for 90 minutes twice a month) for this commitment.

The BMIS 2010 study indicated that parental support for learning was low overall (54.2% nationally), and highly correlated with mother's education and household wealth

(39.7% among the poorest households, 72.8% among the richest). There was also an urban (64.3%)/rural (50.2%) difference in adults engaging in learning and school readiness activities with children and regional differences. Only 11.7% of homes nationally had children's books.

In addition to these findings, a study on levels of understanding and current practices on maternal and child health, ECCD, child disability, and child protection as well as resources of information (UNICEF, MoH, Gross National Happiness Commission, and National Statistics Bureau, n.d.) indicated key areas for communication including:

- Providing additional information to parents and caregivers and building understanding on the benefits of ECCD and early stimulation including home-based stimulation;
- Positioning home-based ECCD and early stimulation as part of Bhutanese culture and tradition;
- Training for caregivers and parents related to home-based ECCD and early stimulation activities;
- Information on what ECCD involves (not forcing children to do something too early which causes stress) and addressing issues related to qualification of teachers or facilitators to lower resistance and alleviate parental concerns.

National ECCD initiatives and gaps

Key to the delivery of an effective ECCD programme in Bhutan is expanding access while raising quality. This requires leadership, systems, infrastructure, finance and human resource capacity.

There are a number of challenges including poor centre infrastructure and staff qualifications. Facilitators are required to have passed Grade 12 (secondary schooling) to have undertaken only 13 days training. While the Royal Civil Service Commission approved an increase in salary from Nu.11,400 to Nu.16,000 in July 2019, salaries remain low.

The ECCD Investment Case Study indicates that about Nu.47 million was spent between 2001 and 2016. It estimates that capital costs for ECCD averaged around Nu.200,000 (US$3,200) and operational costs per child were Nu.8,300 per year (US$122) (MoE & UNICEF Bhutan, 2017). However, conditions at many centres suggest that this does not cover the cost of establishing a safe and stimulating ECCD environment. Given quality concerns the MoE, with UNICEF support, has built centres in every district that at least meet the minimum international level of safe and stimulating environments for 3- to 5-year-olds, at a cost of Nu.1.4 million each (US$20,000).

However, an enabling environment for expansion would require sufficient human, material and financial resources to meet Bhutan's projected ECCD goals. Local communities

supplement national and district costs, and contribute during construction of ECCD centres (e.g. labour contribution, provision of space for establishment of centres, funds/fees, and time). The BEBP cost simulation models for increasing the quality of ECCD projects a facilitator:child ratio of 1:20 by 2024. This is not uncommon for this age group in many countries but in light of Pisani and colleagues' findings (2017) that smaller classes produced better outcomes, some form of teacher assistance should be considered.

Achieving access and equity

Age, hard to reach groups, family income and special needs are the key challenges for access and equity.

ECCD services for children from birth to two years are largely delivered through the health system and with some parenting education. Though parent education data is sparse, limited ECCD opportunities for very young children are clearly a major service gap. MoH initiatives to include stimulation messaging to improve health, nutrition and early development through the C4CD package seem to be in the beginning stages. Schools are also identified as having a role in parent education and the extent to which they are doing this and what support they might need to provide better parenting education on health, nutrition and support for home learning environment should be investigated.

Stunting is a key challenge which has most developmental impact during the zero to two age band and impacts later learning outcomes. Key issues are education for dietary diversity, improved sanitation and poverty alleviation. Many countries (South Africa, Mexico, Indonesia among others) have improved nutritional status and/or educational uptake through cash transfer programmes and a targeted cash transfer programme, could be very effective (Aber, Biersteker, Dawes, & Rawlings, 2013; Cahyadi et al., n.d.; Fernald, Gertler, & Neufeld, n.d.).

For older children, ECCD programmes in Bhutan have expanded significantly since the 9th FYP. Primary school enrolment by eight year olds is near to universal. For younger children, access to ECCD remains limited. Younger children are targeted through health services and parenting education courses which have very limited take up and there was no data on numbers of younger children in group care. While gender is not a barrier to ECCD service take up enrolment of the following is low amongst:

- isolated populations (nomadic and remote settlements);
- rural and growing numbers of poor children in urban areas where ECCD centres are mostly private, therefore not affordable;
- children with disabilities (there are no disaggregated statistics indicating propor-

tions who are in ECCD centres but this group is also at-risk of being out of school and is likely to be under-represented). As well as missing out of early intervention through enrolment in ECCD programmes of different kinds, the lack of therapeutic services and facilitators with specialised training, compounds the risk of this vulnerable group.

While scaling-up access to ECCD centres is a high national priority, very large numbers of children over the next five to ten years will not have had an ECCD experience prior to enrolment in primary school. Given documented concerns about the formality of the pre-primary year the possibility of introducing a bridging model of some kind could be explored (National Commission for Women and Children et al., 2016).

A particular access gap is the lack of SEN provision for children across the whole birth to eight year age range. This complex issue will require developing referral processes, changing parent and staff attitudes, training facilitators and primary school teachers and providing additional staffing, transport and assistive devices as needed. In areas with larger populations, developing designated inclusive ECCD community-based centres with the required staff and equipment, would be efficient use of resources.

Equity in services offered intersects with access challenges. Children from wealthier families access private ECCD provision and have better educational and health outcomes. Currently, the 'Operational Guideline for ACC Daycare Centre 2018,' developed by a task force group that included representatives of NCWC, KGUMS, MoE and Paro College of Education, is the primary guideline for group-based care of children under 36 months. A Curriculum Implementation Guidelines' document has been developed (MoE, 2018), however, this focuses primarily on children aged 3 to 5 years and consequently, there is a gap in curriculum and early learning standards for children under the age of three years.

Achieving quality

RGoB plans for quality improvement focus on infrastructure improvement, enhancing centre quality, awareness raising, training and capacity development (of facilitators, parents and officials), and monitoring and support. The following are noted:

- **Programme and operational guidelines:** ECCD programmes (parent and centre) are informed by a range of curriculum and operational guidelines. Age validated NELDS are the basis for curriculum implementation and the CIG for ECCD centre programmes gives general guidance on the ingredients of a programme to facilitate children's achievement of the NELDS goals. A question to be investigated is whether the CIG is sufficiently explicit to guide practice by facilitators, many of whom

have no or limited training and formal education. Research suggests practitioners with relatively low levels of academic and professional qualifications need support in translating NELDS into learning activities with observable learning objectives that set up opportunities for practitioners to determine what children already know and what they are ready to learn next.

- While there is currently a gap in relation to **guidelines for group care of children under the age of three years,** draft National Early Learning Development Standards are under development. This is important as the need for ECCD service for children aged under 3 years is likely to grow in response to changing family structures and increased movement of women into the workforce.
- **Improving quality of learning environment and quality assurance:** While some centres were able to provide a safe environment with sufficient equipment and resources for both indoor and outdoor activities and play, many centres had hazardous and unhygienic conditions that posed risks to children's safety and health. It is important to ensure a safe, hygienic and stimulating environment at the centre level for children's learning and development. Noticing the discrepancies in the centre resources and measures between the observed and requirements listed in the operational guidelines, the findings show that there is a need to follow up with centres on how operational guidelines are implemented at centre level.
- **Facilitator articulating pathways training and qualifications:** The proposed career path is a significant step towards professionalising ECCD for the future. A training plan with projections on the number of facilitators for entry to the system at different qualification levels needs to be developed and mapped against training supply. The sole focus on in-service training for facilitators undertaking the basic ECCD course and diploma (which can currently only absorb limited numbers of learners) may well be an interim stage to address backlogs, but the training plan should include provision for initial ECCD teacher training opportunities to ensure supply for the expanding system. Micro-credentialing may be worth investigating as an option for facilitators who are not able to study full-time but who wish to upskill or undertake specialism modules. The extent to which current content of different training programmes covers the full ECCD age range, including conception to three years as well as progression to early schooling years, is unclear, but this would be important to promote coherence across the ECCD system. It is noted that MoE documents take an holistic approach by focusing on health and nutrition, safety and protection as well as education. Similarly, health practitioner training programmes should include stimulation to promote holistic development and child protection elements, if they do not already do so. It should be noted that course content must

be updated and reaccredited regularly to ensure training and qualifications are underpinned by current research in ECCD to support best practice.

- **ECCD training for officials and parent school principals:** Given rapid planned expansion and limited training supply, suitably capacitated on-site monitoring and support by officials – and in particular by parent school principals – is critical for quality. Mechanisms for monitoring delivery of support are essential. In addition, the caseload of ECCD centres per official/principal needs to be determined and the requisites for regular and effective monitoring (familiarity with the QMTEC, time, transport and subsistence allowances) need to be in place. The number and frequency of monitoring visits should be a reporting indicator.
- **Training for support for early stimulation through the health system:** The health system is the primary ECCD service point for children aged birth to two years, and is being leveraged for improving developmental as well as health outcomes through the introduction of C4CD. It will be important to ensure that health workers, particularly those at Outreach Clinics and sub-posts, and the VHWs who bridge the health services and the community, are adequately trained on this package (Thinley et al., 2017).

Achieving system efficiency

ECCD services are positioned in many of the studies and documents reviewed here as enabling system efficiencies in later schooling and by reducing secondary disability through early identification and intervention programmes. ECCD programmes of different kinds will show more efficiencies as quality improves.

Multi-sectoral coordination is referenced in the Draft National ECCD Policy and is a key means of improving system efficiency. Children and their parents/carers link to services in multiple ways and each of these opportunities should create an access point for holistic services through referrals. RGoB policies and strategies are committed to the synergies of multi-sectoral coordination at all levels. The ministries of health and education and the National Commission for Women and Children with UNICEF and Save the Children are the key stakeholders in delivering broader ECCD services with family and community and private sector involvement. Having an integrated framework, supported by a comprehensive ECCD coordinated database, will be required for effective ECCD programme delivery, and so that programme models may be evaluated and implemented, contextualised to Bhutan's needs, along with innovative and sustainable financing options (UNICEF, 2019). Many countries have found that coordination in service delivery can generate effi-

ciencies and mutual accountability provided that the necessary buy in, time and resources for joint planning, financing and monitoring are made available.

Having a finalised National Multisectoral ECCD Policy and Plan, which locates ECCD within multiple sectors, will signal political will, drive commitment, allow for a more holistic understanding of ECCD and assist towards sustainability. A National Steering Committee led by the MoE and MoH has already been mandated as the "nodal agency for formulating, planning, coordinating, monitoring and supporting ECCD programmes and services" (MoE,2011:8).

Expansion and sustainability

ECCD system expansion and sustainability depends on a number of factors including:

- **Awareness raising and communication about the importance of ECCD at all levels of Bhutanese society** to drive take up and supply of services. This would include politicians, government, religious leaders, CSOs, the private sector as well as communities and families.
- **Targeting:** The progressive realisation of universal access to ECCD programmes should begin with the most vulnerable young children including those in remote areas, poor children (rural and urban) and those with disabilities and serious health and nutrition difficulties. This will require a robust data system to identify the greatest needs and track progress towards meeting them.
- **Developing efficient and effective service delivery models:**
    - **Parent education:** While the home environment is critical to support early health, nutrition and development, the current parent education programme needs careful revision. Mechanisms to support Care for Child Development need to be put in place. A clear understanding of the workloads and focus on the key performance areas of facilitators is essential, as well as designated oversight and support from clinic and/or MoE staff. An assessment of the capacity of existing health and education staffing and systems to provide sufficient support for 0 – 2 year olds (and their parents) should be undertaken.
    - Other innovative ways of offering parent education other than the NFE programme and the face-to-face Parenting Education, via community-based ECCD centre programme, may be more successful. For example, parent and child groups offered with support from a broadcast radio programme in Rwanda have shown promising child outcomes (Pisani et al., 2016; Save the Children, 2015, 2016).

- Endorsement of parent education session attendance and the importance of ECCD by local leadership and religious and cultural institutions could strengthen uptake but raising awareness and demand requires strengthening of the service supply side.
- The use of mobile technologies for parent education especially for hard to reach communities, has been suggested. Overall national connectivity is a prerequisite. A digital platform can be very effective for basic messaging. For example, 'Mom Connect' (Department of Health, Republic of South Africa, 2019) for pregnant women and the first year of the child's life has had considerable take up. Key to this is that it does not have data charges or require a smartphone. Other Apps with child development content (e.g. Care up, 2018) have been less widely used due to data costs and hardware requirements.
- For **3- to 5-year-olds,** the mobile community-based centre programme needs to be evaluated, in particular implementation fidelity and understanding of the daily schedule by volunteers who staff it on days when the facilitator is in another village. Models such as well managed community playgroups twice a week have been found to be effective in low income contexts (Dawes, Biersteker, Girdwood, Snelling, & Horler, 2019).
- For **early schooling**, ensuring that the pre-primary interface of schooling is child-centred and follows a pedagogy that supports transition is important. For children who have not had an ECCD experience a more formal bridging programme may be a necessary interim measure.

Initiatives to improve ECCD service access and quality

A number of guidelines and capacity building and training initiatives for parents, facilitators, and officials have been put in place to improve service quality. These are summarised in this section and reveal some gaps as well as fragmentation across services for the birth to eight year ECCD age cohort.

MoE curriculum, standards and operational guidelines

- **National Early Learning Development Standards (NELDS)** (MoE, 2014) which have been age validated, provide expected standards for 36-48 months, 49-60

months and 61-72 months with indicators and strategies for supporting healthy development for each of the following domains:

1. Physical health, wellbeing and motor development
2. Social and emotional development
3. Approaches towards learning
4. Cognition and general knowledge
5. Language, communication and literacy development
6. Spiritual, moral and cultural development

- **Curriculum Implementation Guide (CIG) for ECCD Centre Programmes** (ministry of education, 2018d) is an improved and updated version of guidelines first developed in 2011. It assists facilitators to implement an ECCD centre programme based on the goals of the NELDS and focused on children aged 3 - 5 years. The CIG includes information on child development, the NELDS, setting up the physical environment, interactions, learning activities and daily routines, classroom management, health and nutrition, child assessment and family engagement. Learning activities are organised by themes set out week by week. Early literacy and mathematics are a focus for special activities. The level of the CIG is general and not differentiated for age progression.
- **Pre-Primary Programme Guidelines** (Royal Education Council, 2012) provide guidance for implementing an ECCD (pre-primary) programme for children aged 2- 6 years. These provide simple guidance on setting up the learning environment, half and full day schedules, thematic and play-based approach to early learning, child assessment and family and community engagement. Adult child ratios and teaching staff duties and qualifications are specified. Despite the play focus, the programme for all ages provides for a separate maths and language/literacy time period. Sections of these guidelines cover similar areas to the CIG and it is not clear if the CIG has replaced them.
- **Operational Guidelines for Early Childhood Care and Development Centres** (ministry of education, 2018) contain national minimum standards of service to be provided by all ECCD centres and their implementation is mandated in the Draft National ECCD Policy. These focus on physical infrastructure, safety, health, hygiene and nutrition, water and sanitation, learning materials and space, and human resources. Specific guidelines are provided for private centres, workplace centres and for community-based centres and mobile ECCD facilitator programmes. The guidelines for private and workplace are very similar while the hours and process for establishing community ECCD and mobile ECCD differs, involving community and

local authority engagement to establish them. Infrastructure requirements are also more flexible than for private and workplace-based centres and specified requirements for facilitators only is that they be trained in ECCD.

- **Parenting Education Manua**l (ministry of education & UNICEF, 2018) is a 16-module curriculum focusing on child care and development, particularly stimulation and play materials and 'parenting today'.
- **Monitoring and evaluation tools** include a Quality Monitoring Tool for ECCD Centres (QMTEC). The extent to which the QMTEC is systematically enacted in the field is unclear. However, quality monitoring and the provision of tailored support to deliver quality programmes is essential.

NCWC guidelines

- The Guidelines for Crèche Center in Bhutan (National Commission for Women and Children, 2018) are aimed at service providers for children aged from birth to three years and are aligned with health and safety operational standards. The guidelines make general comments regarding child-centred practice and the importance of aligning the curriculum with C4CD Plus. This document provides general information about such services including financing mechanisms and examples from other regional countries. The guidelines are intended to support women's participation in the workforce by providing quality childcare for children.

Professional development for ECCD service delivery

- Training opportunities and career pathways for ECCD facilitators are still in development. When the RGoB initiated community-based ECCD centres, the MoE recruited NFE instructors as facilitators for community ECCD centres who are Class X or XII graduates (UNESCO, 2015). The REC Status of ECCD Study reported that from 2013, MoE planned to regularise employment of ECCD facilitators providing civil servant benefits (this occurred in 2019), and to assist community ECCD facilitators with Class XII qualification to pursue the diploma course at Paro College of Education (Wangchuk et al., n.d.). All facilitators are now required to be Class XII graduates and receive 13 days training to become full-time ECCD facilitators. In response to the backlog of untrained or under-trained facilitators, current training for those working in the ECCD phase prior to formal schooling has an in-service focus.
- ECCD training opportunities include the following:
    - **Early Childhood Carers and Development Training of the Trainers:** This is for programme officers in the MoE, Dzongkhag Education Offi-

cers, Assistant Dzongkhag Education Officers, lecturers at the Colleges of Education in Paro and Samtse, and schools/centres for children below age six. Trainers are expected to conduct workshops for people who work at the district, *gewog* and village levels such as head teachers and school teachers. They bear the main responsibility for communicating knowledge of ECCD with parents, family and community members. Content focuses on basic development, nutrition and care.

- **ECCD Facilitators' Training:** This short course is offered by MoE. There is a 13-day ECCD basic training programme. Facilitators employed at community-based ECCD centres offer parenting education to community members focused on children aged under five years.
- **ECCD Diploma:** A three-year, part-time, in-service, blended learning programme for facilitators was developed with UNICEF support and has been offered at Paro College of Education since 2016. A career progression ladder has been developed and the diploma will provide credits towards a future Bachelor of Education in ECCD. The diploma is a key step towards professionalising the ECCD workforce (Diploma in Early Childhood Care and Development, n.d.). Twenty-seven participants were enrolled in the first intake and completed the diploma at the end of 2018. At the request of MoE, student intake was doubled from 30 to 60 and there are currently 84 in-service ECCD facilitators enrolled (ministry of education, 2018c). A major concern is that the fees and stipend for diploma students are completely donor-dependent (e.g. UNICEF has supported the first two cohorts). This raises sustainability concerns.
- **Bachelor of Education Primary programme:** Teachers in the formal schooling system may elect to enrol in Bachelor of Education Primary programme offered by the Royal University of Bhutan Colleges of Education. The entry requirement for the B.Ed is a Class XII pass. The qualification offers a choice of specialisms, one of which has a focus on child development, creative arts, play and ECD, and Foundation of Early Childhood Education.

Governance and administration of ECCD

Education management is decentralised to local level with the MoE responsible for policy guidelines and overall coordination.

Implementation is the responsibility of the *Dzongkhag/Thromde* level Education Offices with the following roles and responsibilities:

- **Coordination of ECCD programmes** (centre-based programmes, school-based programmes, parenting education programmes and health-based programmes), budgeting for ECCD programmes and centres and advocating for ECCD amongst various stakeholders including other government and non-government sectors, communities and families.
- **Establishment of community-based ECCD centres** including stakeholder coordination, needs assessment, recruitment and deployment of ECCD facilitators.
- **Monitoring of ECCD centres,** which includes identifying parent schools responsible for monitoring and supervision of ECCD centres and professional development.
- **Support to private and workplace-based ECCD centres.**
- **Management and supervision by parent school principals.** Under the guidance of the *Dzongkhag/Thromde* Education Office, parent school principals are required to manage and supervise ECCD centres. Besides the daily programme it includes provisioning professional support, mobilising supplementary resources and learning materials, and multi-sectoral support (health, *gewog* administration). They must also advocate for community participation, provide ongoing facilitator development and involvement in management, as well as monitor centre quality and coordinate parent participation in education and centre support.

Similarly, the powers and functions of the health system have been devolved from the central authority to local peripheries. The MoH provides technical support to the district health offices to implement, monitor and evaluate national policies and programmes at the district level (Thinley et al., 2017). Therefore, implementation of first 1,000 days stimulation messaging via health workers will require district and local support and engagement.

Multi-sectoral coordination

Despite the Draft National ECCD Policy acknowledging the holistic nature of ECCD including health and nutrition, social protection (including provision for maternity leave) and education, ECCD programming in Bhutan appears to be predominantly the responsibility of the MoE and focuses primarily on early learning, particularly centre-based programmes for children aged three to five years. The recent Situation Analysis (UNICEF, 2019) identifies the need for a multi-sectoral legal and policy framework to guide planning and coordinated/ integrated implementation of a continuum of ECCD programmes from conception to eight years.

Financing of ECCD centres and programmes

The main sources of funding for ECCD centres/programmes are the RGoB, UNICEF, and Save the Children. In total, approximately Nu.178 million was spent on ECCD from 2010 to 2016. RGoB's highest area of investment is salaries for ECCD facilitators (Nu.77 million), for UNICEF it is in the establishment of centres (Nu.38 million), and for Save the Children it is in M&E (Nu.10 million), which includes development of monitoring tools, capacity building of DEOs and school focal persons, field visits for classroom observations, and impact evaluation studies. RGoB district funds cover most operational costs of ECCD centres and communities/parents provide labour for centre construction, fees ('contributions') and volunteers assist the facilitators. In addition, Bhutan has recently received a three-year grant from the Global Partnership for Education (GPE) in support of the BEBP goals, including an ECCD expansion component (Global Partnership for Education, 2018).

Plans and targets for expanding ECCD programme access and quality

Expansion plans prioritise ECCD for children aged 3- 5 years attending ECCD centres/programmes. The BEBP 2014 aims at 50% ECCD centre uptake by 2024. The 2017 ECCD Investment Case Study projected expansion requirements based on two scenarios: one to reach 50% by 2024 and 100% by 2030, and another for a steady rate of expansion towards 100% in 2030 as shown in Table 4. These projections were based on data from the 2005 Population and Housing Census. It is necessary for these projections to be revised in light of the 2017 Population and Housing Census.

Table 4 Summary of ECCD Coverage Requirements (2017 to 2030)

	50% by 2024	**Scenario A** 100% by 2030 (additional 50% between 2025 and 2030)	**Scenario B** 100% by 2030
Total no. of centres	949 centres	1,768 centres	1,768 centres
Total no. of new centres	717 centres	818 centres	1,536 centres
Average no. of new centres to be established annually	90 centres	136 centres	110 centres
Total no. of facilitators	1,432 facilitators	1,091 facilitators	2,522 facilitators
50% coverage achieved by year	2024	2024	2022

As noted in the 2017 Situation Analysis (UNICEF, 2019), the RGoB continues to rely heavily on development partners for financial and technical support, which in the light of dramatic projected expansion and associated human resource, capital and operational requirements, will be a critical challenge for meeting targets and achieving sustainability. The investment case report (MoE & UNICEF, 2017) indicates the poor state of infrastructure of many community-based ECCD centres and estimated the cost of establishing new ECCD infrastructures at US$20,000 or approximately Nu.1.4 million (2016 Establishment Fund allocation) with an additional cost of Nu.8,300 per child per year. However, it should be noted that refurbishing existing infrastructure is likely to require less capital investment and should be costed. Either way, it is timely for either RGoB or UNICEF to develop a costing model to determine what it will cost RGoB to meet the ambitious 2030 target.

Strategies to ensure financial sustainability suggested in the ECCD Investment Case Report include the following:

- Establishment of a National ECCD Trust Fund (collected through earmarked tax revenues; tax exempted individual/organisational donations, fundraising campaigns).
- Promoting Corporate Social Responsibility to establish more workplace-based centres or support from companies for community-based ECCD centres or support establishment costs or child fees.
- Charging minimal fees ('contributions') depending on family resources and negotiated with the community.
- Launching a Child Budgeting Initiative: to coordinate and synchronize the various ECCD stakeholders' plans and finances.
- Exploring alternative ECCD models to extend reach at lower cost.

Proposals to upscale access to and quality of ECCD services focus on centres for 3 - 5-year-olds. This suggests that improvements in ECCD services for birth to 2-year-olds and 6- to 8-years olds in the first two years of formal schooling will be covered by existing health or education infrastructure and resources, and staff professional development plans respectively.

In support of the planned expansion, the GPE/ESPIG proposal outlines the following activities towards access to quality ECCD for 34% of children (ministry of education, 2018c):

- Establishment of 100 ECCD centres in *Dzongkhags/Thromdes* in three years converting vacant facilities such as outreach clinics, schools, extended classrooms, community learning centres and village temples.
- Reach 1,500 parents/caregivers through the Parent Education Programme based at ECCD centres in the three-year period.

- Towards expanding the number of facilitators needed, 100 newly recruited ECCD facilitators will contribute to reaching the required number of 706 facilitators by 2021.
- Structured basic training for 100 new facilitators and 60 will be enrolled in the diploma course by 2021. As numbers trained are low there will be rigorous on site observations of ECCD practice by Save the Children and MoE with the target of 70% of centres meeting QMTEC requirements.
- Orientation of District Education Offices/*Thromde* Education Officers and Education Monitoring Officers for monitoring the programmes.
- Indicator data will be tracked from EMIS and disaggregated by district, rural/urban/remote and gender.

Alternative models

The 2017 Situation Analysis (UNICEF, 2019) indicates that alternatives to centre-based programmes may be considered as a means of increasing universal and thus equitable access to ECCD, especially in hard to reach areas and for children with special education needs. Options may include:

- Home-based programmes;
- Mobile facilitators delivering programmes to children in shared community spaces;
- Conversion of low-attendance or closed primary schools into ECCD centres; and
- Leveraging current C4CD initiatives of the MoH and build on the substantial coverage of the health centre outreach by creating health facility-based ECCD programmes.

The ECCD Investment Study suggests development of media packages to promote parent discussions as a primary platform for home-based ECCD programmes for communities where establishing centres is not feasible due to remoteness, nomadic lifestyle, or low population. Mobile telephone ownership is increasing and could be used for health and stimulation messaging. With rapid urbanisation (the urban population is growing at 6.7% per annum), there are many urban parents employed in relatively poorly-paid unskilled jobs. This has resulted in urban poor families. A corollary to this is that a focus on ECCD for disadvantaged urban children is now needed.

5

Findings: Empirical evaluation

In this chapter, findings are presented from surveys of parents of children aged birth to two years and of children aged 3- 5 years (both attending and not attending ECCD centres) and primary school teachers. Data gathered from interviews with a range of ECCD service providers and in *situ* observations of ECCD centres are also presented. The evaluation team has also responded to the unique opportunity to compare the development of children who are participating in ECCD programmes with children who have not had this experience. Systematic gender and equity lenses were sustained throughout the evaluation. The evaluation team was interested in stakeholders' perceptions of the relevance, effectiveness, efficiency and sustainability of ECCD services – both health and education – provided for children from birth to six years of age (see Appendix H for a detailed discussion).

Survey findings

This section reports the findings of the quantitative analysis conducted using several survey datasets: (i) the parent survey of children aged birth to two years; (ii) the parent survey of children aged 3- 5 years (both in and out of ECCD); and (iii) Pre-Primary teachers. The key measures developed using data from the parent surveys are outlined first, and descriptive statistics from the parent questionnaire data are shown.

Parent surveys: children aged from birth to two

Descriptive statistics

Table 5 shows means, standard deviations, minimums and maximums of age, wealth, and maternal education, and percentages of the sample from each gender based on the

survey of parents of children aged from birth to two years. The mean age was just under 16 months, but some of the sample was older than the target range of birth to 35 months so was excluded from subsequent analysis. The mean maternal education level was between 2 (primary) and 3 (lower secondary). The wealth index was standardised to have a mean of 0 and SD of 1. The sample consisted of 51% girls.

Table 5 Descriptive statistics of key measures: children aged birth to two years

	Mean	SD	Min	Max
Age (months)	15.74	10.12	0.80	62.67
Wealth index	0.00	1.00	-2.63	1.90
Maternal education	2.75	2.17	0.00	7.00
Gender (% girls)	51%			

Correlations were calculated between ECDI scores and age, wealth, maternal education, and gender (Table 6). Age (Rho = .72) had the largest correlation with ECDI scores. Scores were higher for children with more highly educated mothers and greater household wealth. There were no significant differences by gender.

Table 6 Correlations between ECDI scores and other measures

	Rho	P value
Age	0.72	< .001
Wealth index	0.18	0.003
Maternal education	0.18	0.003
Gender (girl)	-0.01	0.828

Differences in raw ECDI scores (unadjusted for covariates) by *dzongkhag* were calculated for birth to 2-year-olds (Figure 2). The highest average scores were in Chhukha (.63) and the lowest were in Tsirang (.42). Figure 3 shows differences in average ECDI scores across the age range of birth to 35 months, with the shaded grey area representing the 95% confidence interval. Substantial differences in scores were found by age, suggesting the scale for birth to 2-year-olds has a strong gradient across age. This means that older children were on average more likely to have higher scores than younger children and demonstrates that our measure is valid from a child development perspective.

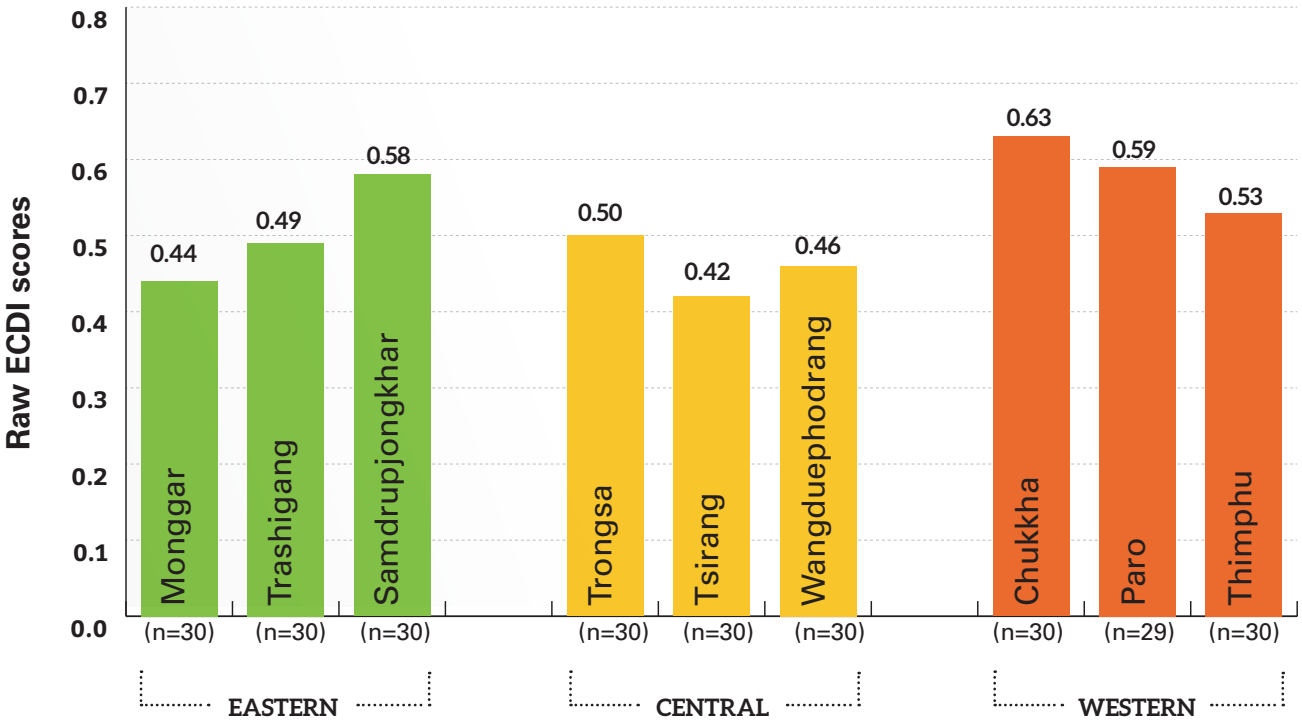


Figure 2 Raw ECDI scores by *Dzongkhag*, birth to 2-year-olds

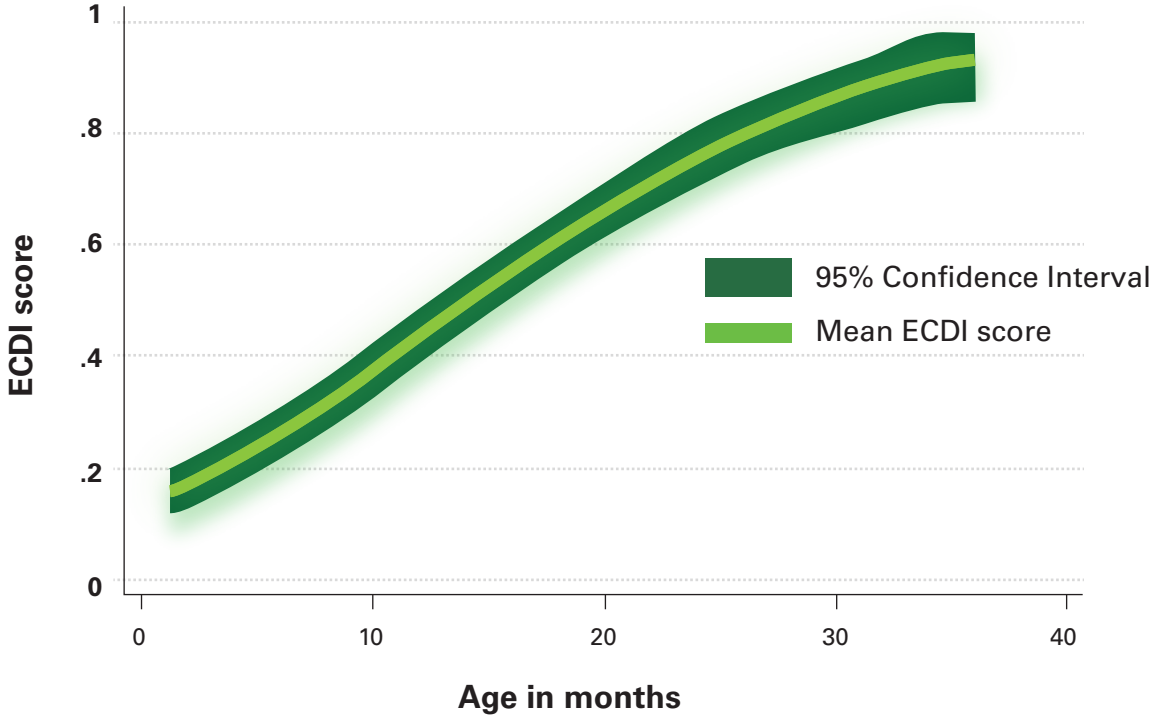


Figure 3 Mean ECDI scores by age (0 to 35-month-olds)

After controlling for other covariates, maternal education, wealth, gender, and participation (or otherwise) in a parenting programme were not significantly associated with children's ECDI scores (Table 7). Nationwide Parenting Education roll-out was only completed in 2019. Assessing the impact of parenting education is thus recommended. However, children who participated in the C4CD programme had significantly higher scores (b=.07, $p < .05$) than those who had not participated. These findings suggest that parent and child participation in C4CD may be related to improved development for young children.

Table 7 Associations between socio-demographic variables and ECDI scores

	Coeff	Std Err	P value
Maternal education (9 levels)	0.012	0.007	0.094
Wealth index (per SD)	0.011	0.017	0.502
Age (per month)	0.029	0.001	0.000
Gender (girl)	-0.026	0.025	0.309
Attends parenting programme	-0.050	0.036	0.156
Attends C4CD	0.068	0.032	0.035

Regarding the source of learning information, around 24.81% of the parents (birth to two years) obtained learning information from ECCD centres, and another 23.7% accessed through national television. Some (19.26%) also reported health centres (19.26%) and family (17.04%) as the source of information about child learning and development.

Parent surveys: children aged 3- 5 years

Descriptive statistics

Table 8 shows means, standard deviations, minimums and maximums of age, wealth, and maternal education, and percentages of the sample from each gender and by ECCD attendance from the survey of parents of children aged 3- 5 years. The mean age was around 57.5 months, but some of the sample was outside the target age range of 36 to 72 months. The mean maternal education level was around level 2 (primary education), but with mothers over the full range of no qualifications (level 0) to master's degree or above (level 8). Table 9 presents the distribution of centre type attendance by maternal education. The wealth index was standardised to have a mean of 0 and SD of 1. The sample consisted of 53% girls and 51% ECCD attenders.

Table 8 Descriptive statistics of key measures: children aged 3- 5 years

	Mean	SD	Min	Max
Age	57.46	10.89	19.83	81.60
Wealth index (SD units)	0.00	1.00	-2.71	2.22
Maternal education (9 levels)	2.07	2.16	0.00	8.00
Gender (% girls)	53%			
ECCD attendance (%)	51%			

Table 9 Centre type attendance by maternal education

Maternal education	Community	Mobile	Private	Workplace	Total
	(N = 255)	(N = 10)	(N = 25)	(N = 5)	(N = 295)
Don't know	6	0	0	0	6
No formal education	116	4	1	0	121
Pre-school	4	2	0	0	6
Primary	31	0	2	0	33
Lower secondary (7-8)	19	0	0	0	19
Middle secondary (9-10)	51	1	6	1	59
Higher secondary (11-12)	20	3	4	1	28
Associate degree/ Diploma	4	0	2	0	6
Bachelor	4	0	8	2	14
Master or higher	0	0	2	1	3

Correlations were calculated between ECDI scores and age, wealth, maternal education, gender, and ECCD attendance (Table 10). Age (Rho = .29) and ECCD attendance (Rho = .26) have the largest correlations with ECDI scores. Older children had higher ECDI scores than younger children and children who attended ECCD centres had higher scores than those that did not. Furthermore, children from wealthier families and with mothers with higher levels of education had higher ECDI than their peers. On the other hand, there were no differences between boys and girls on ECDI scores.

Table 10 Correlations between ECDI scores and other measures

	Rho	P value
Age	0.29	< .001
Wealth index	0.18	< .001
Maternal education	0.16	< .001
Gender (girl)	0.01	0.816
ECCD attendance	0.26	< .001

ECCD attendance vs non-attendance

Parent surveys were used to compare children who attended ECCD with those who did not. Raw ECDI scores (i.e. ECDI scores that were unadjusted for covariates) were calculated by *dzongkhag* and ECCD attendance. Figure 4 shows that scores were higher in every *dzongkhag* for attenders compared to non-attenders, but the difference varied from just 0.02 points in Wangduephodrang to 0.15 points in Samdrup Jongkhar.

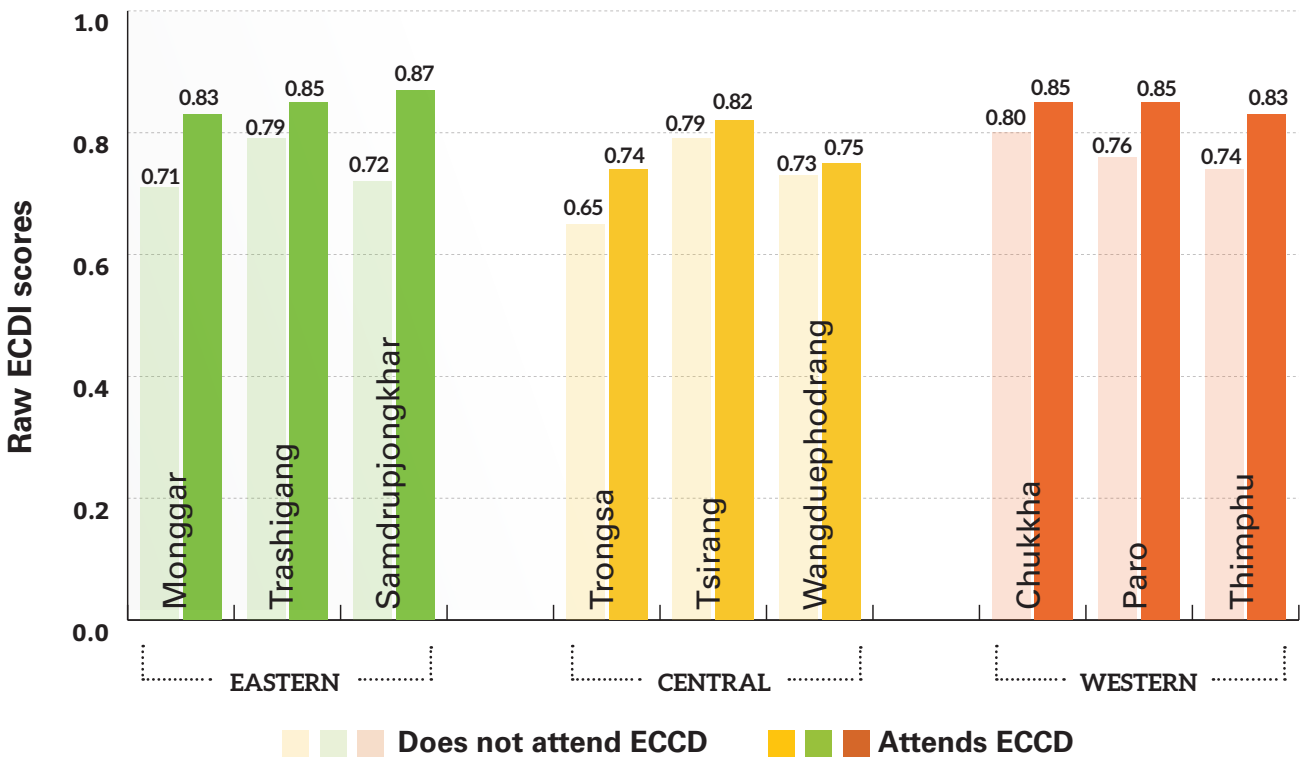


Figure 4 Raw ECDI scores by *Dzongkhag* and ECCD attendance

More parents of ECCD attending children (43.73%) reported obtaining learning information mainly through ECCD centres than those parents of non-ECCD attending children (24.22%). It is of interest that 24.22% of parents of non-ECCD attending children reported obtaining learning information through ECCD centres – this finding warrants further investigation.

On the other hand, more parents of non-ECCD attending children reported the main source of learning information as national television (child does not attend ECCD = 23.18%, child attends ECCD = 16.95%), from health centres (child does not attend ECCD = 16.96%, child attends ECCD = 9.15%), and friends (child does not attend ECCD = 16.96%, child attends ECCD = 10.17%).

In short, it appears that parents whose children do not attend ECCD rely on ECCD centres, national television, health centres and friends as sources of information regarding their child's learning.

Urbanicity

Raw ECDI scores were also broken down by urbanicity. Table 11 shows that those attending ECCD had higher scores in rural, semi-rural, and urban areas. Children in rural areas had slightly lower scores than other children.

Table 11 Raw ECDI scores by urbanicity

	N	Mean	SD
Rural			
Not attending ECCD	182	0.74	0.16
Attending ECCD	193	0.81	0.15
Semi-rural			
Not attending ECCD	61	0.75	0.16
Attending ECCD	58	0.85	0.08
Urban			
Not attending ECCD	46	0.75	0.16
Attending ECCD	44	0.84	0.16

Figure 5 shows raw ECDI scores by age, broken down by ECCD attendance, and excludes those children who were aged below 36 months or over 72 months. A smoothing mean procedure was applied to each line. The chart shows that ECDI scores at the younger ages were very similar, and that differences increase across age and are largest for older children.

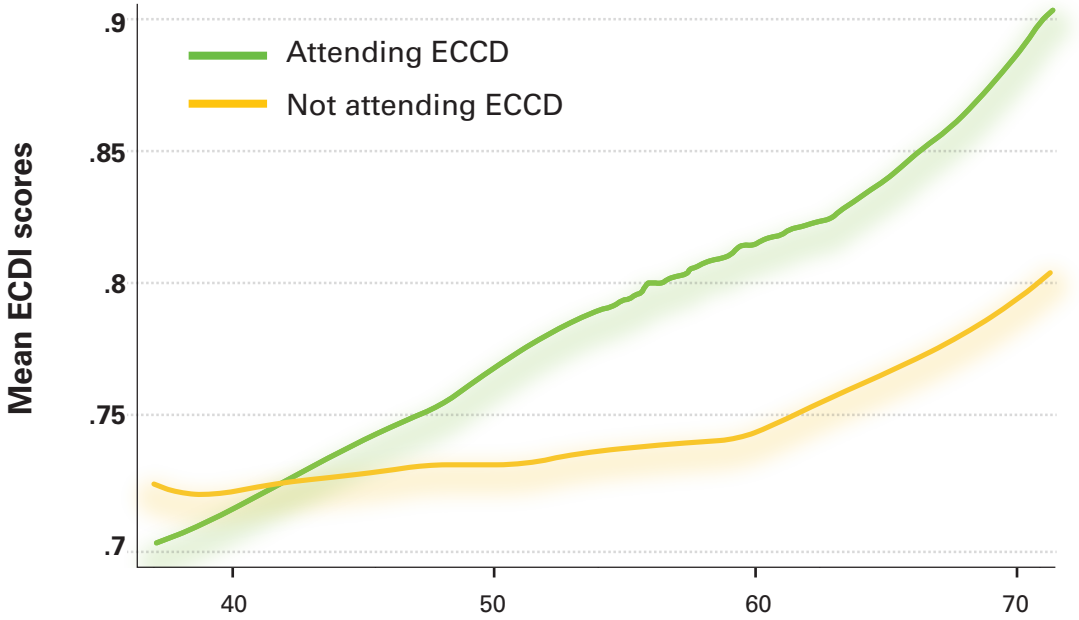


Figure 5 Raw ECDI scores by age and ECCD attendance

These differences in ECDI scores across age by ECCD attendance were further examined by using a multilevel regression model to account for the sample clustered within villages (level 2) and *dzongkhag* (level 3), and to control for differences in maternal education, wealth, urbanicity, and gender. Figure 6 shows the results of the multilevel regression with marginal mean ECDI scores plotted across the age range of 36 to 72 months, by ECCD attendance.

Scores at age 36 months were very similar and not significantly different between ECCD attenders and non-attenders. The gap between ECCD attenders and non-attenders increase gradually across the age range, and at the older ages ECCD attenders had significantly higher ECDI scores than ECCD non-attenders. This suggests that, even after controlling for socio-demographic differences, older children who were attending ECCD had developmental scores that were substantially higher than those who were not attending. This is an important finding as it demonstrates that ECCD attendance makes a difference for children that exceeds typical maturational gains. It is also important to note that the gap between children attending vs non-attending widens over time. Research has shown that this gap will not be closed without a targeted intervention. This contributes to the argument for investment in early education.

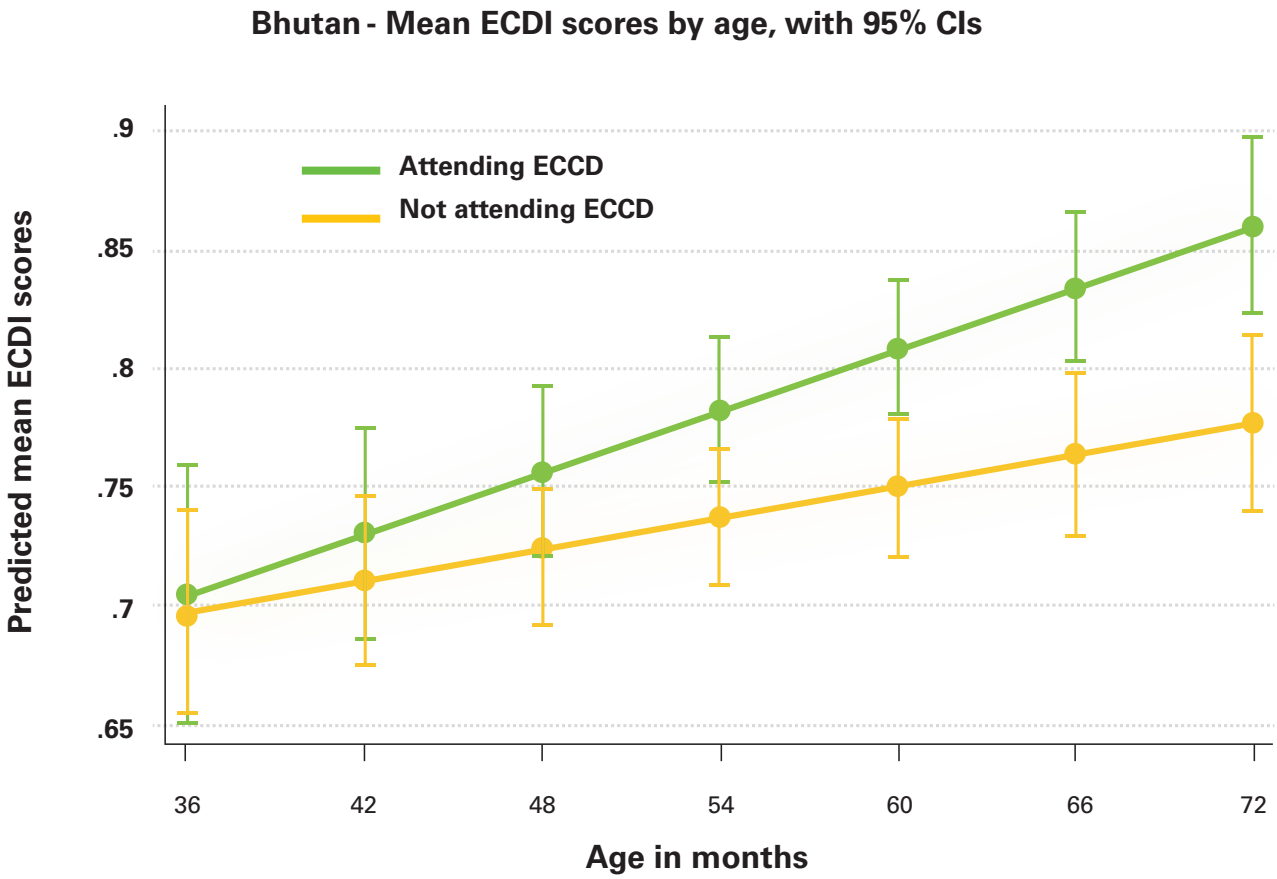


Figure 6 Differences in ECDI scores by age and ECCD attendance

Children with special needs

Table 12 shows mean ECDI scores by whether or not the parent reported that the child had a difficulty (e.g. seeing, hearing, self-care). Around 12% of parents in our study reported a difficulty. Parents also reported whether antenatal care had been used. Around 90% of parents reported using antenatal care, but scores were very similar between those who had (ECDI = .78) and had not (ECDI = .80) used it. ECDI scores were also very similar regardless of whether parents had attended a parenting programme, or a C4CD programme.

Children whose parents reported a difficulty had, on average, substantially lower mean ECDI scores (0.62) than those whose parents reported no difficulties (0.80). That more than 1 child in 10 in our study had a special need of some type points to the urgent need for inclusive education as well as to ensure that crèche caregivers, ECCD facilitators, health workers and primary school teachers are equipped to support the participation of children with special education needs. The provision of targeted professional development requires urgent investment.

Table 12 Raw ECDI scores by reported difficulty (e.g. seeing, hearing, self-care)

	n	Mean	SD
No difficulty reported	511	0.80	0.13
At least one difficulty reported	73	0.62	0.21

Stunting rates

Data were also collected on children's height. Within this study's sample the overall stunting rate for children aged 36 to 59 months was 21%. This is close to the 2016 average rate for Asia of 23.9% (UNICEF 2017) and lower than the reported 22.3% rate for children aged 6 to 59 months in Bhutan in the 2015 National Nutrition Survey. The rate for children attending ECCD was 19%, and the rate for children not attending was 22%. While this appears to be a positive trend for children attending ECCD, further research is needed that employs a larger sample size and accounts for a range of variables at household, parent and child level such as household income, maternal education and child birth weight.

Breastfeeding

Ninety per cent of parents of children aged 3- 5 years reported exclusively breastfeeding up to six months of age, meeting the international recommendation (World Health Organization, 2011). However, for those parents of 3- to 5-year-olds reporting shorter durations of exclusive breastfeeding there were significant differences in ECDI scores compared with longer breastfeeding durations (see Figure 7 and Table 16, Appendix E1). Figure 7 shows the results of a multilevel regression, presenting differences in ECDI scores by duration of reported exclusive breastfeeding, controlling for the child's home learning environment, ECCD centre attendance, whether the parent had participated in a parenting programme, maternal education, household wealth, age, gender, and urbanicity. The chart shows significantly lower ECDI scores at the lowest breastfeeding durations, until around 12 months where the line becomes flatter.

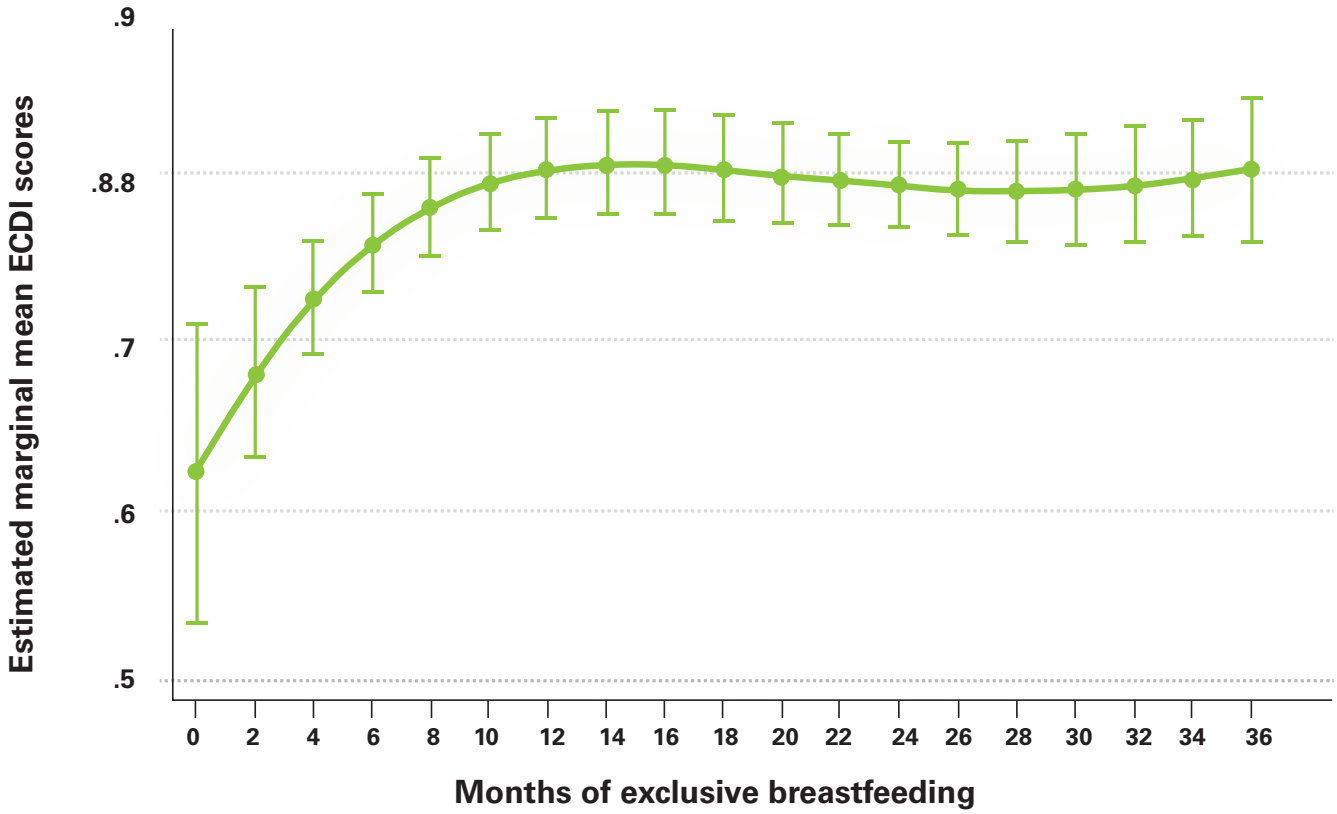


Figure 7 ECDI scores by duration of parent-reported exclusive breastfeeding

One way of improving ECCD services and enhancing their effectiveness could be to ensure that all children receive exclusive breastfeeding in their first six months with co-feeding thereafter.

Contributions to ECCD

It is noted that the documentary analysis, as well as information provided by members of the Evaluation Reference Group and the attendees at the Stakeholders Advisory Group in January 2020, indicate that ECCD is provided free and that voluntary contributions of parents/caregivers may have been misunderstood as 'fees'. Nonetheless, in this evaluation, according to parents' report (see Figure 8), most ECCD centres were completely funded by government (59%), however, the remaining 41% of centres vary widely in the proportion of fees ('contributions') paid by parents. Table 13 shows the average monthly fees ('contributions') reported by parents for community, mobile, workplace, and private ECCD centres.

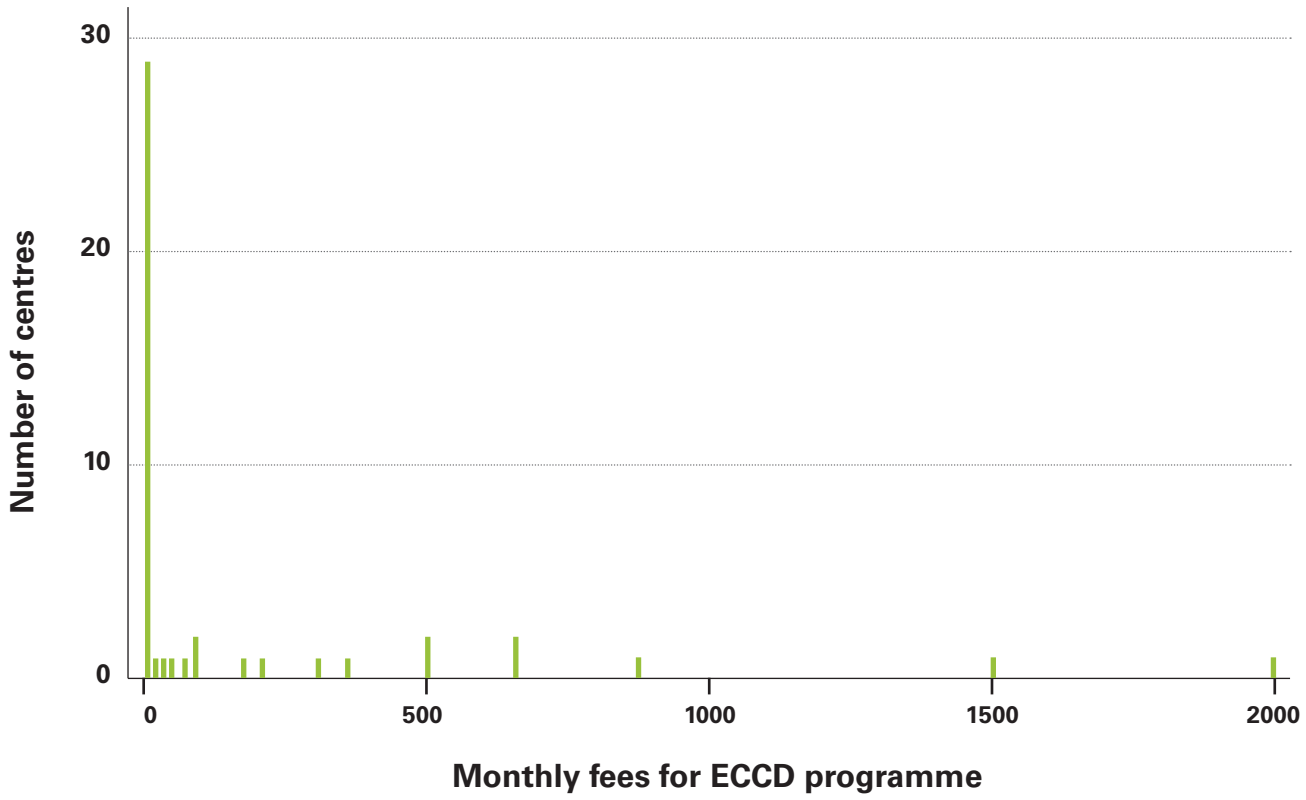


Figure 8 Distribution of monthly fees ('contributions') for 54 centres

Table 13 Parent-reported mean monthly fees ('contributions') for ECCD attendance

	N	Mean	SD	Minimum	Maximum
Community ECCD	255	128.09	311.74	0	2000
Mobile ECCD	10	5.83	5.04	0	10
Workplace ECCD	5	870.00	0.00	870	870
Private ECCD	25	6806.36	9310.38	100	29000

Pre-Primary teacher surveys

Pre-Primary teachers gave their views on the school readiness of children who had attended ECCD compared to children who had not attended ECCD (see Appendix D2). Children who had attended ECCD were rated as more competent on a range of school readiness indicators than children who had not attended ECCD. Pre-Primary teachers thought that independence and self-confidence were most important for school readiness. Learning is cumulative and firm foundations are important. Children who have attended ECCD were reported by Pre-Primary teachers to have stronger foundations for formal education than children who had not attended ECCD. The extent to which Pre-Pri-

mary teachers have cooperated with others are presented in Figure 10 (Appendix E2).

Secretaries of Centre Management Committees survey

Table 14 shows Centre Management Committee secretaries' responses to questions on proportion of their budget allocated to various expenditures. A relatively small proportion (average 13%, maximum 20%) was allocated to salaries, with facilitator professional development programmes, and materials and equipment both having higher average reported percentages of expenditure. Allocation of annual ECCD centre budgets reflect a proportionately low allocation to facilitators' salaries. The evaluation team was advised that the low mean allocation to facilitators' salaries is because salaries of community-based centre facilitators are paid by RGoB and are disbursed at district level. Salaries of caregivers or facilitators employed at crèches, private centres or work-placed centres are allocated at centre level.

Table 14 CMC questionnaire: allocation of annual budget

Categories	Mean %	SD	Min %	Max %
Salaries	13.0	3.3	10	20
Facilitator professional development programmes	18.2	5.7	10	30
Rent and management fees	12.3	4.3	5	20
Furniture	13.0	4.3	5	20
Materials and equipment	13.9	4.9	10	30
Repairs, maintenance, improvement works	12.7	5.1	5	30
Daily operating expenses (e.g. water, cleaning)	9.8	3.9	5	15
Administration fees (e.g. audit fees)	7.3	3.4	0	15
Others	0.4	1.2	0	5

Interview findings

Interviews were audio recorded, transcribed and analysed to generate themes. While interview protocols were employed, at times information provided by respondents addressed different topics. For this reason, a summary table is provided in Appendix F to assist in direct comparison of relevance, effectiveness, efficiency and sustainability as reported by ECCD providers.

Crèche caregivers

Five crèches were randomly selected in Thimphu area. There are no other crèches in Bhutan as they are provided at major ministry workplaces or headquarters of agencies to encourage female workforce participation – these are all situated in Thimphu as the capital city of Bhutan. The minimum academic requirement for crèche caregivers is Class X. Most caregivers undertake a five-day initial training and a two-week professional development course. Crèches provide child care services for children aged six months to five years, raising concern regarding the school readiness of children transitioning directly for crèche-based care to formal school education. Caregiver child ratios differ, ranging from 1:3 to 1:9.

Caregivers had been employed at their current crèches for less than a year to five years. Work hours range from 40 to 45 hours per week in summer and from 35 to 38 hours per week in winter, with overtime amounting to one hour once or twice each week.

ECCD was described by respondents as follows:

- Programmes focusing on child learning and development that are aimed at older children (three years and older).
- Benefitting children by teaching them new skills such as social, motor and communication skills.
- Preparing the child for formal education.
- No explicit reference was made to health care in respondents' definitions of ECCD.

Centre facilitators

Centre facilitators are commonly referred to as 'ECCD facilitators' in Bhutan. All centre facilitators interviewed held Class XII qualifications and had completed a 13-day basic training course at the start of their employment. One facilitator had completed a diploma in ECCD and two were enrolled in a diploma in ECCD. Three facilitators had completed the Early Literacy and Early Maths (ELM) training as professional development. One facilitator had completed both the Local Etiquette and the Rapid Neuro-Development Assessment (RNDA) courses as professional development. Two facilitators were being trained to deliver the Parenting Education Programme. One facilitator had completed the Education in Emergency (EIE) training.

Centre facilitators had been employed at their current ECCD centres for a year to nine years. Work hours were variable, ranging from 25 to 40 hours per week, with an additional half hour to two hours per day required from time to time for planning and preparation.

Seven of the ECCD centres at which facilitators were employed catered for children

aged from 3- 6 years; two centres catered for children aged 3- 5 years. Total centre enrolments ranged from 8- 50 children. The facilitator child ratios differed markedly, ranging from 1:8 to 1:24. Only one ECCD centre reported currently having children with disabilities enrolled. Across interviewees, the nature of additional support for children with disabilities or children from vulnerable groups included increased opportunities for engagement and counselling, extra care and love, and subsidised enrolment fees ('contributions') for low income families. The impact of such supports needs to be assessed. One centre facilitator reported personally buying slippers and clothes for children from low-income or single parent households. Five centres reported offering no additional support for such children.

All centre facilitators conduct parenting education programmes that focus on parenting behaviours including nurturing, monitoring, teaching and advising parents on child development.

Definitions of ECCD were education-oriented:

- Having a focus on education.
- Preparation for formal schooling.
- A period of holistic development.
- A place for children to relax and learn simultaneously.
- A centre where facilitators teach, monitor and guide children through play and where children learn social skills.
- Critical for building children's self-confidence, enhancing their learning, encouraging social skills and supporting the development of communication skills. These were seen to be particularly important for children in rural areas for whom ECCD service attendance provided opportunities to play with toys and to socialise with other children.

Secretaries of Centre Management Committees

CMC members are directly nominated by the local parent school principal, by a teacher or by a local official. They may be parents of children attending the ECCD and must be local residents. As a minimum requirement, all CMC members are required to be literate. However, educational qualifications of CMC secretaries vary markedly. Of the nine people interviewed, one person held a master's degree, three held bachelor's degrees, one person had a Class XII certificate, two had Class X certificates, and one had worked in a monastery and primary school. One secretary declined to comment.

One CMC secretary had held the position for ten years, one for nine years and another

for six years. Two of the secretaries had less experience in these particular roles, but had held education-related positions for more than 20 years. Some of the respondents had prior teaching experience: as an ECCD facilitator, a school teacher and school principal or vice principal.

Secretaries differed in their levels of involvement in centres. In general, centre management committees guide, manage and supervise centres. CMCs assist with enrolling children, developing monetary contribution structures, allocating funds, organising events, maintaining the centre infrastructure and creating awareness about ECCD services. Secretaries of CMCs were reported to participate in centre meetings, take care of children, monitor centre performance, organise centre-related activities and programmes, maintain personnel files and participate in centre fundraising. In addition, secretaries of CMCs liaise with parents, ECCD facilitators and various ECCD agencies. Enrolment numbers differed somewhat from those reported by centre facilitators: centre enrolments reported by facilitators ranged from 20 to 100 children with facilitator child ratios ranging from 1:3 to 1:20. One secretary did not have information on enrolments. Five secretaries were aware that centre facilitators worked overtime from time to time.

Salaries were not raised as a concern by ECCD facilitators, perhaps due to ECCD facilitators' recent inclusion in the civil service. This was, however, raised by secretaries of CMCs who spoke of the need to increase facilitators' salaries.

Descriptions of ECCD were education-oriented, but varied:

- To prepare children for formal school, commenting on differences between children who attend ECCD centres and those who do not.
- Important for developing social skills, communication skills and learning abilities.
- Of particular benefit to children of uneducated parents and working parents.

The importance of flexible hours care, to support working parents, was raised by one CMC secretary. Establishing whether there is a wide demand for flexible hours care would be of interest.

District Education Officers

Pre-requisites to appointment as a district education officer is master's degree qualification in education, leadership or management as well as experience in the education sector. Five DEOs reported serving in their current position for more than nine years; four DEOs had served for three or fewer years. Three DEOs reported having more than 24 years of experience in the education sector; six DEOs reported having relevant work experience of five to 16 years.

Multiple priorities were also raised by DEOs with regard to addressing sustainability

of ECCD in Bhutan. These included the need to improve existing ECCD infrastructure, to fund facilitator professional development, to raise parent awareness of the benefits of ECCD participation, to set up additional mobile ECCDs in remote villages, to improve parenting education programmes and to extend and consolidate stakeholder engagement.

DEOs' descriptions of ECCD included both health and education. Parents were encouraged to access health care and education for their children via:

- Parenting education programmes,
- Awareness meetings,
- Orientation sessions,
- Reproductive health programmes,
- Health officers' visits to ECCD centres and during the general health check-up each year.

Health workers

The minimum qualification required to become a health worker is Class XII (secondary school). Of the nine health workers interviewed, four held Class XII (one of whom also holds a Bachelor of Science in Public Health), two held Class X, and the highest academic qualification achieved by two health workers was Class VIII. Despite this, health workers had many years of experience in diverse settings. Four health workers reported having relevant work experience of 30 years or more, four reported having relevant work experience of 20 years and above and one health worker reported having 10 years of relevant work experience. Five health workers reported working at the current health centre for more than 20 years; two health workers reported working for 10 years at their current health centre. Two health workers had worked for three years or less at the current health centre.

Health workers defined ECCD services broadly as addressing the birth to six years age range and the inter-connectedness of health, education and wellbeing. One health worker defined ECCD as exclusive breastfeeding up to six months of age and continuing with co-feeding for two years, as well as observing children for milestones related to body movements and sensory development. One health worker defined ECCD as instructions for playing and communication-focused activities that assisted the learning of children. Three health workers defined ECCD as 'a centre for growth of children and caregivers', 'a temple for guiding children below six years' and as 'an agency for child development' respectively.

Turning to continuing professional development opportunities, health workers appear to have markedly different experiences. Only two health workers reported having attended additional training. These included regular workshops and special short courses pre-

sented at their health centres. Professional development included training on C4CD and training on infection control, sanitation and hygiene. However, five health workers reported a lack of professional development opportunities at their health centres.

Work hours range from 29 to 40 hours per week and responsibilities were reported to include a diverse range of duties that varied from site to site but for the most part include both primary health care, and preventative care and health education.

Centres differed somewhat with regard to age of children for whom health services were provided. One health centre catered for children of all ages and one health centre provided care for children from birth to three years of age. Three health centres were reported to offer services to children from birth to five years. Two health centres catered to children from birth to eight years. Two health centres catered for children from birth to 12 years.

Similarly, the Information, Education and Communication (IEC) programmes provided differed. Some provided ANC, PNC and 'institutional care' for children aged from birth to five years. One health centre offered IEC on child learning and development milestones. Two health centres advised parents on caring for newborn children (hygiene, nutrition and when to seek medical attention). Four health centres offered basic health education regarding child immunization, exclusive breast feeding, monitoring child growth and provided follow-up services. One health centre did not offer any parent education programmes.

District Health Officers

Seven of the nine DHOs interviewed hold a bachelor or master's degree in public health management. District health officers had deep knowledge of the health sector: six of the nine DHOs reported serving in their current position for more than seven years. All DHOs had more than 13 years' experience in the health sector and five reported more than 21 years' experience. Seven DHOs had prior experience working as health assistants in Basic Health Units (BHUs); others had been employed at the Khesar Gyalpo University of Medical Science (formerly known as the Royal Institute of Health and Science), at FONPH, or as an auxiliary nurse/midwife.

DHOs' definitions of ECCD were variable and included:

- Monitoring of milestones, immunisation, exclusive breast feeding, regular health check-ups and caring for children from conception onwards.
- Stimulation of child development through play to assist with cognitive, physical and emotional development.
- Constituting six domains of development which included gross motor, vision, fine motor, hearing, speech and language, emotional and behavioural.
- Providing care for children aged 3- 5 years.

Findings from centre observations

This section presents findings from observations conducted in November 2019 at the 59 participating ECCD centres. Centres (N=59) were scored against an observation protocol on the quality of early education settings. Tables are presented in Appendix G. Around half of the centres observed (55.93%) were located in a separate building, and one-fifth (20.34%) were located in rooms within houses or primary schools.

Hazardous conditions and safety measures

According to the Operational Guidelines for ECCD Centres issued by the MoE and UNICEF (n.d.), centres are required to follow safety measures regarding emergency preparedness, health, hygiene, and nutrition, and ensuring hazards are kept away from the centres.

Within 300 metres from the centre building or play area, half of the centres had roaming dogs (50.85%), and open sewer holes or drain (50.85%); some centres also had large animals tied or roaming (40.68%), motor vehicle traffic (32.20%), dangerous electrical equipment (28.81%), open wells[2] (16.95%), and ponds (11.86%). One centre had plants/ factories that emit toxic chemicals nearby, and other hazards that could cause injury or death were also observed in 13.56% of the centres. Some centres had unclean conditions within 300 metres from the centre building or play area such as open drains (49.15%), garbage dumps (47.46%), open defecation or urinating areas (37.29%), and stagnant water or damp areas providing breeding places for flies and mosquitoes (22.03%). From the observation field notes, some centres were located in risky locations, such as being close to the cliff or river. Some centres were affected by the dust near the centre and bad smell from toilets.

Centres were also rated on the presence of hazardous conditions of covered space, including broken floors, leaking roof, inadequate lighting, accessible electrical sockets, or presence of alcohol, tobacco, doma, or illegal drugs. Around one-fifth (22.41%) of the centres did not have any of the hazardous conditions or there was a protective barrier between the children and the conditions, 44.83% had one or more of the hazardous conditions beyond 10 metres of the centre, and 32.76% had one more condition within 10 metres of the centre.

The ECCD centre operational guidelines require centres to have evacuation routes plan in each room. However, 64.91% did not have any evacuation route plans displayed, and 7.02% had more than one evacuation plan displayed (n = 57).

[2] **Here, 'open wells' was interpreted by enumerators to include uncovered, standing water.**

Regarding noise pollution, 37.29% of the centres were not affected by sounds from outside sources that prevented hearing of speech. The other two-thirds had sounds from outside sources that prevented hearing of speech more than half of the time (27.12%) or half or less of the time (35.59%).

Water, sanitation and hygiene (WASH)

More than half of the centres had separate toilets for boys and girls (57.63%), clean toilets with adequate ventilation (61.02%), and toilet paper for children to use (62.71%). Toilets were not present in at least two of the centres, according to field notes. Both drinking water and washing water was available and adequate for 60.34% of the centres, and in 13.79% of the centres, drinking water and washing water was not adequate.

The evaluation team observed several hygiene measures in the ECCD centres that were required as stipulated by the Operational Guidelines for ECCD centres issued by the MoE and UNICEF (2018). Nearly 80% of the centres had soap available for washing hands, and 61.02% had running water for washing hands. In 44.07% of the centres, efforts to promote washing hands were observed. Only a portion of centres had clean materials available for drying hands (32.20%), clear written guidelines regarding the care of sick children (27.12%), first aid kit (23.73%).

Outdoor space and resources

Nearly all centres (94.83%) had an outdoor space available for gross motor activities; among these centres, 39.66% of them had adequate outdoor space. The Operational Guidelines for centres state that centres should provide a certain number of sets of age-appropriate outdoor play equipment. The number of sets of outdoor play equipment observed with respect to the requirements in the guidelines is presented in Table 17 (Appendix G). The percentage of centres meeting the minimum required amount for each equipment range from 6.78% to 22.03%, in particular, more centres reach the requirement for swings (22.03%), items for sand and water play (20.34%), and balls (18.64%), and fewer centres have enough seesaws (8.47%) and sandpits (6.78%). Meanwhile, more than half of the centres do not have any items for sand and water play at all (59.32%). Given that several children are likely to play simultaneously at sand and water play, encouraging social interactions, prioritising the provision of sand pits and water troughs with associated tools for digging, pouring and transporting water and sand should be prioritised over the provision of a second slide or seesaw.

Classroom facilities

All centres had classrooms and half of them were large enough for all children to participate in all indoor activities. On average, centres scored 2.22 out of 3 (SD = .31) across

the 12 items (n = 55), and for most of the items, less than half of the centres attained a rating of 3. Ratings attained by centres on individual items are presented in Table 18 (Appendix G). More than 95% of the centres had learning corners, materials on math concept and gross motor equipment for children. All centres had fine motor equipment and around half had enough equipment available for children to use. Books were available in 90% of the centres, and among these centres, around half had age-appropriate books stored within children's reach for more than half of the children to use simultaneously. The other half had books for less than half of the children to use simultaneously. Many centres (82.14%) did not have any tables or chairs for children to use. Where learning corners were present in almost all centres, most of them were not used by children during the observation. Whether this points to a preferencing of teacher-directed learning over learning through play should be further investigated. Indeed, play-based learning may be an appropriate focus for professional development.

The Operational Guidelines for ECCD centres also stipulate the number of indoor play equipment that centres should provide. The number of sets of indoor play equipment observed with respect to the requirements in the guidelines is presented in Table 19 (Appendix G). More centres had sufficient building blocks (32.20%), puppets (18.64%), and dolls with accessories and household items (15.25%). Fewer centres had enough items for table activities, games and puzzles, small hand-held toys, and age-appropriate books. Around half of the centres did not have any science items (54.24%) and musical instruments and drums (49.15%). Here too, when making decisions regarding budget allocation, prioritising additional resources for indoor play-based learning should be prioritised over second slides or seesaws.

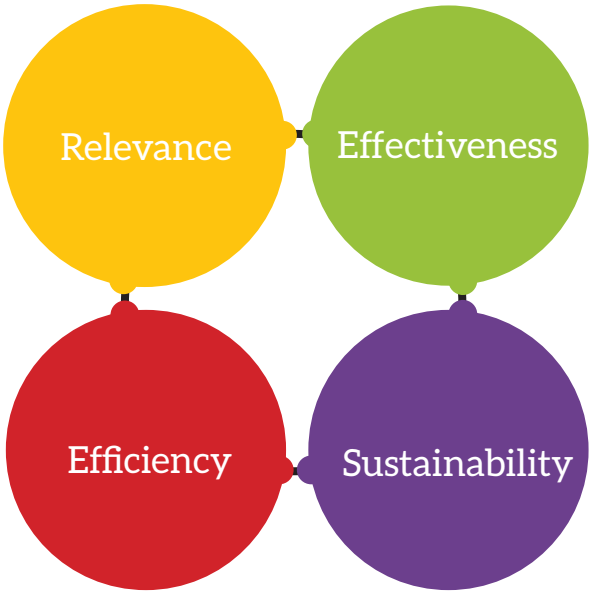
Quality and centre type

Of the 59 centres 51 were community, 2 were mobile, 5 private and 1 was a workplace-based ECCD centre. Although the sample size was not large enough to perform statistical comparisons, means and ranges of the scores under classroom facilities, WASH, and conditions of covered space were calculated (see Table 20, Appendix G). On average, private centres had higher scores than community ECCD.

6

Conclusions

Overarching conclusions are presented below, grouped according to relevance, effectiveness, efficiency and sustainability.



Relevance

Operational alignment: national, dzongkhag and centre priorities

Variability was observed in DEOs' perception of the alignment of operation of ECCD centres with dzongkhag priorities. However, when this topic was addressed in interviews with DEOs, it appeared that the contextualisation of national operational guidelines vary. Specific challenges appear to be meeting 1:15 centre facilitator child ratios and achieving standardised terms of employment.

On the other hand, in the health sector (albeit a smaller sample), complete alignment was reported between health centres and dzongkhag and national priorities. The difference between sectors can perhaps be explained by DHOs' reports that their role is to implement MoH policy rather than to adapt it to meet dzongkhag needs. DHOs did, however, speak of a need for dzongkhag-level guidelines.

A large proportion of surveyed centre facilitators, secretaries of CMCs, DEOs and DHOs indicated that they were familiar with ECCD-related policies at national and dzongkhag levels, however, many were unaware of these policies. Ensuring that all stakeholders are aware of ECCD-related policies and priorities at national, dzongkhag and community level is a key component of improving access to and the quality of ECCD services across the Kingdom.

Policy-practice alignment

In order for the provision of ECCD to meet the 'relevance' criterion, the evaluation team explored policy-practice alignment. The Draft National Education Policy (2019) states that 'all children from 0 to eight years of age shall have access to ECCD programmes and services', 'ECCD centres must address the needs of all 36 to 71 months old children and be inclusive of gender, disabilities, socioeconomic backgrounds, or location' (p. 4). ECCD service provision is in need of urgent attention and resourcing to meet these priorities. This is evidenced by the high number of children with disabilities in Bhutan, yet service providers report lacking necessary knowledge and experience to provide services to children with disabilities.

Crèche caregivers, ECCD facilitators, health workers and DHOs spoke of the need for improved inclusion of children with disabilities. Indeed, only four health workers reported providing care to children with disabilities at their health centres and four health workers reported having no experience in dealing with children with disabilities.

Around 12% of all parents in this evaluation reported that their child had a difficulty (such as seeing, hearing, self-care). Children whose parents had reported a difficulty had substantially lower ECDI scores than those whose parents reported no difficulties. Children whose parents reported a difficulty are performing at significantly lower levels on the ECDI than their age-mates (Table 12).

It is suspected that a large proportion of children with special education needs are not currently attending ECCD. A national profiling exercise needs to be undertaken to develop an accurate assessment of the nature of such children's special needs as a first step to addressing targeted ways in which to support crèche caregivers, ECCD facilitators and health workers in this regard. Given that these children comprise 12% of the sample, this is a large number of children who are set up to achieve less success, require more support and contribute less to the economy of Bhutan.

Effectiveness

Importance of common understandings of 'early childhood care and development'

The Draft National ECCD Policy of 2011 defines ECCD as:

> Encompassing all the essential supports that a young child needs to survive and thrive in life, as well as the supports a family and community need to promote children's holistic development. This includes integrating health, nutrition and intellectual stimulation, providing the opportunities for exploration and active learning, as well as providing the social and emotional care and nurturing that a child needs in order to realize her/his human potential and play an active role in her/his family and society (ministry of education, 2011, p. 14).

In this evaluation, the focus was on ECCD of children from birth to six years. However, determining stakeholders' understandings of the term, 'early childhood care and development' was an important priority and indeed, marked differences were observed. Crèche caregivers and ECCD centre facilitators perceived ECCD to describe programmes focusing on holistic learning and development for children aged three years and older, primarily to prepare children for school. Health care was not included. Secretaries of CMCs offered similar definitions, but added the purpose of supporting workforce participation by providing childcare facilities. An extension of this priority was the need for flexibility in hours of care. DEOs commented on both health and education. Health workers included health and education in their definitions, however, their definitions were mixed: 'a temple for guiding children below six years' to a focus on milestone achievement. DHOs' definitions were similarly variable but included health and cognitive stimulation.

A clear definition of ECCD is articulated in the Draft National ECCD Policy. The National ECCD Policy needs to be finalised and broadly disseminated to all ECCD stakeholders in order to embed a shared understanding of ECCD in stakeholders' strategic planning. Shared knowledge of national ECCD policy priorities is a critical first step to a coordinated multi-sectoral approach to ECCD, without which effective multi-sectoral ECCD collaboration is unlikely to be achieved.

Impact of child participation in ECCD services

Participation in ECCD makes a difference to child outcomes. There is no statistically significant difference in ECDI scores in children at 36 months based on parent-reported child competencies, but the gap between ECCD-attending and non-attending children

widens as children age: older children who were attending ECCD programmes demonstrated significantly higher ECDI scores than non-attending children even after controlling for socio-demographic differences between the two samples (see Figure 6). Scores were higher in every *dzongkhag* for attenders compared with non-attenders, although the difference varied. Interestingly, children attending ECCD had higher scores in rural, semi-rural and urban areas, but children in rural areas had slightly lower scores than their peers – this draws attention to the need to address child outcomes for children in rural areas in particular.

These findings align with interview data: centre facilitators described ECCD services as effective or very effective and reported observing improvements in children's learning and development over the course of their participation in ECCD programmes. This was echoed by secretaries of CMCs who reported that children who attend ECCD centres outperform their school classmates on transition to school.

Health workers and DHOs reported that parents are satisfied with health care services. Indeed, antenatal counselling and parent education about the importance of immunization and assessment appear to be associated with increases in access to health care for children aged under two years and an associated reduction in the mortality rate of infants and children under the age of five years. Further children, from birth to three years, who participated in the C4CD programme, had significantly higher ECDI scores than those who had not. These findings tentatively suggest that parent and child participation in C4CD may be related to improved development for young children. This is supported by eight out of nine health workers' reports that health services are 'effective' or 'very effective' and that C4CD is effective.

However, there is a drop-off in parents accessing health care for their children after they reach the age of two years. A particular concern is the extent to which the needs of children with special education needs are being adequately addressed and one DHO suggested that an impact assessment is needed to determine the impact of current interventions to support children with special needs and their families. This proposal is supported by the evaluation team.

DHOs raised additional priorities to sustain the ECCD sector in Bhutan such as: establishment of additional private centres; clear guidelines regarding service provision; equipping health centres with adequate playground facilities that are accessible to all children, including children with additional needs; and maintaining uniform quality standards in public and private ECCD centres.

Gender

Results from the evaluation team's documentary analyses and empirical study suggest minimal gender differences in ECCD. Documentary analyses indicated that there are no

gender differences in nutrition status, infant and young child feeding practices, child care, health-seeking behaviours, immunization, and disability prevalence. Further, our empirical data indicate that gender differences on the ECDI are not significant. The issues around gender and equity are further discussed in the access and equity section on page 37.

While some national data indicate that there are no gender differences in ECCD or primary school enrolment, the 2017 Situation Analysis (UNICEF, 2019) reports that at age six, 21% of girls and 18% of boys were out of school. That stated, ECCD provides a unique opportunity to build strong foundations for gender equality. Indeed gender transformative ECCD is pivotal to promoting equal rights for both boys and girls.

International research suggests that ECCD programmes can be gender transformative if they meet the following conditions. There is no empirical basis to suggest that this should not be the case in Bhutan.

Conditions for gender transformative programmes:

1. Provide equal opportunities for boys and girls to experience high quality nurturing care;
2. Support the development of egalitarian values and expectations;
3. Allow children to experience and participate in what are considered "gendered" activities (e.g., encouraging girls to engage in constructive play and boys to play with dolls);
4. Generate awareness among caregivers and ECCD facilitators about the harmful sequel of gender stereotyping and inadvertent or deliberate gender discrimination;
5. Encourage fathers to become more involved in the upbringing of their children;
6. Support the employment of men as ECCD facilitators; and
7. Empower mothers and female caregivers and support their rights to adequate nutrition, health, education, health and freedom from violence.

Parenting education programmes

After controlling for maternal education, wealth and gender, participation (or non-participation) in a parenting programme did not appear to be associated with gains in ECDI scores for children under three years. However, children whose parents participated in C4CD programmes had significantly higher scores than those whose parents had not participated.

The evaluation team suggests that there may be confounding variables impacting on these findings. C4CD is highly structured, likely resulting in high fidelity of implementation by health workers. Consequently, this may mask the impact of participation in parenting programmes. Parenting education programmes delivered by health centres have no specific budget allocation and are currently funded by parent donations or by accessing funding from health workers' travel budgets. This sets up greater variability in delivery

and parent engagement.

Parenting education programmes delivered through ECCD centres were reported by centre facilitators to be effective but characterised by multiple constraints that include variable attendance and at times, low literacy levels of parents. These concerns were similarly raised by DEOs.

A long-term evaluation of the efficacy of parenting education programmes is proposed. Gains in child outcomes are at times characterized by 'sleeper effects.' That is, gains may not be immediately apparent but emerge later as differences in children's learning and development trajectories over time.

Exclusive breastfeeding

Ninety percent of parents of three to five-year-olds reported exclusive breastfeeding up to six months of age, meeting World Health Organization recommendations. Significant differences were found between children receiving breast milk beyond eight months and those receiving breast milk for fewer than eight months. This is a good outcome for children benefiting from breastmilk but highlights the substantial disadvantage of those children who do not receive exclusive breastfeeding. This highlights the need for MoE, MoH and other stakeholders to continue to advocate for exclusive breastfeeding until children reach six months of age and to continue to provide breast milk as part of their diet thereafter in line with MoH guidelines.

Stunting

In this sample, stunting rates for children aged 36 to 59 months was 21% - close to the 2016 average rate for Asia of 23.9% and similar to the 21.2% rate for Bhutan reported in the National Nutrition Survey 2015. Stunting rates for children attending ECCD were 3% lower for children attending ECCD programmes, this may be because children impacted by stunting did not attend ECCD programmes. Insufficient data precludes the evaluation team from drawing conclusions from this finding. However, the relationship between ECCD participation and stunting warrants further investigation.

School readiness

Turning to primary teachers' ratings of school readiness of ECCD-attending versus non-attending children, on average teachers rated attending children as competent or very competent in 74% of the suite of school readiness characteristics, compared with a total of 13% for non-attending children. 'Easier' children who are perceived by teachers to have greater levels of competence are more likely to develop better relationships with their teachers with the ripple effect of increased opportunities for learning and development. Given the cumulative nature of education, such children start their formal school

education on a stronger trajectory than their less advantaged peers.

This further reinforces the importance of ECCD participation. Measuring the impact of ECCD participation versus non-participation at school entry would provide empirical evidence to strengthen the argument for government investment in ECCD.

Efficiency

Stakeholder collaboration

Stakeholders' collaboration with other sectors in the past 12 months was of interest. Secretaries of CMCs were most likely to have worked with facilitators in their centres. This is important, but perhaps to be expected. Most had not worked with CMCs from other *dzongkhags* or with specialist practitioners within their own *dzongkhags*. The lowest rating was for working with the MoH. While mindful of the challenges that multi-sectoral collaboration poses, opportunities for inter-*dzongkhag* networking as well as to work more closely with the MoH would set up opportunities to build upon well-established relationships between mothers and health workers as evidenced by high levels of ante- and postnatal care and the well-established C4CD programme.

Pre-Primary teachers were most likely to have worked with ECCD facilitators from within their *dzongkhag*. Most teachers had not collaborated with specialist practitioners in the *dzongkhag* or with teachers in other *dzongkhags*. While it is a positive finding that centre facilitators and Pre-Primary teachers are in communication to support smooth transitions for children into formal school education, this may be a consequence of Pre-Primary teachers' participation in 'Step by Step' professional development which equips them to integrate ECCD-related pedagogical strategies into the school curriculum. The Step by Step programme was introduced in 2011. It would thus be timely to review and update this programme. In addition, as transitions to school are a multi-dimensional process, opportunities for other role players to contribute to this critical phase in a child's life should be investigated.

Compliance with Operational Guidelines

Operational Guidelines for ECCD centres issued by the MoE and UNICEF provide guidelines on safety, health, hygiene, space and materials for learning and play. Inadequate access to water was reported during an interview to hamper hygiene practices at one centre, clearly placing staff and children at risk and adding to demands placed on the centre facilitator to meet a duty of care. Indeed, centre observation data suggest that 20% of centres did not provide soap for handwashing, 40% had running water for handwashing and fewer than one-third of centres had clean materials for drying hands, guidelines on caring for children who were unwell, or first aid kits.

Few centres met the minimum number of indoor and outdoor equipment requirements

set out in the Operational Guidelines. However, some of the guidelines are arguably arbitrary (such as the number of slides per child). Here too, eliciting the opinions of ECCD facilitators, CMC secretaries and DEOs regarding priorities for teaching and learning, and equitable access to infrastructure and resources is recommended.

Centre sufficiency and resourcing

A consistent message from all education stakeholders was the need for additional ECCD centres. However, during interviews, centre facilitators, secretaries of CMCs, and DEOs spoke of the need for additional ECCD centres, particularly in geographically remote areas. This message was emphasised by multiple stakeholders during meetings with the Evaluation Reference Group and the National Stakeholder Consultation Group in January 2020 to discuss research findings.

Financial resourcing of services sits across efficiency and sustainability. Insufficient teaching and learning resources were reported in crèches (which are co-funded by parent organisations/government ministries and parents) and ECCD centres, along with the need for additional ECCD centres and for the upgrading of existing centres. Clearly, these concerns impact on centre efficiency. While it is acknowledged that crèches are parent-funded, some children appear to be transitioning directly from crèches to school and children's school readiness would clearly be impacted in such circumstances.

Secretaries of CMCs raised multiple concerns that included facilitators' salaries, the need to improve centre monitoring, to upgrade initial training and to provide more professional development. Seven of the nine DEOs interviewed raised the challenge of insufficient financial resourcing of services.

Twelve per cent of our sample were reported by their parents to have additional needs, yet crèche caregivers, centre facilitators and health workers reported very few children with additional needs (if any) attending their services. This raises concerns regarding the inclusion of these children in health and education and questions the inclusiveness of ECCD services.

Sustainability

Financial sustainability

Crèches are self-funded; most crèche caregivers suggested that parents would be willing to pay more for crèche services[3].

Most ECCD centres are completely funded by government (59%), however, the remaining 41% of centres vary widely in the proportion of fees ('contributions') paid by

[3] **Parents of children attending crèches were not included in this evaluation.**

parents (see Figure 8). Seven of the nine centre facilitators interviewed suggested that parents may be willing to pay more for their child to attend the ECCD programme.

Most CMC secretaries indicated that their budget was not sufficient to cover the daily operation. At centre level, the largest average budget expense is professional development for facilitators, followed by materials and equipment. Salaries were not raised as a concern by ECCD facilitators, but secretaries of CMCs spoke of the need to increase facilitators' salaries. Given the current political will in Bhutan to take a systems approach to raising both quality and access to ECCD, and taking into account the overwhelming evidence of the importance of early childhood for lifelong learning and development, the evaluation team recommend that improved – and regulated – conditions of employment for ECCD facilitators and crèche caregivers be prioritised.

Additional sustainability priorities

Multiple priorities were raised by stakeholders with regard to addressing the sustainability of ECCD in Bhutan. All priorities are interrelated, reinforcing the need for a systems approach to increase both access and quality. As overarching conclusions, the need for first, increased allocation of financial resources to *dzongkhag* level health and education; second, for dedicated budgets at *dzongkhag* level to fund parent education programmes; and third, improved coordination of C4CD and ECCD interventions by the MoE and MoH are apparent.

Infrastructure, staffing and staff qualifications were identified as priorities by DEOs and DHOs. There is a need to set up additional ECCD centres – both permanent and mobile – particularly in remote areas. Associated with this is the need to raise parent awareness of the benefits of ECCD participation, to improve parenting education programmes and to extend and consolidate stakeholder engagement. Professional development of ECCD facilitators and health workers to address quality of service provision goes hand-in-hand with improving access. Given that many health workers were employed prior to the raising of minimum qualifications for this role, the evaluation team recommend that specific professional development needs of health workers across the regions be determined in order that targeted professional development is provided that addresses these needs.

Approximately 12% of the children whose parents participated in this evaluation were identified by their parents as having special education needs. This means that more than one in ten children may need targeted assistance to access education. In the context of ECCD settings, this highlights the need for the physical environment (including the outdoor gross motor play environment) to be accessible to all children.

The establishment of additional private health and ECCD centres should be considered. However, there is a need to monitor minimum quality standards in public and private centres. Setting such monitoring processes in place is one of the key recommendations of this evaluation.

7

Theory of Change

The model in Table 9 reflects a systems-approach needed to address optimal outcomes for children. The evaluation team collaborated with members of the Evaluation Reference Group to reconstruct the Theory of Change. It reflects current programming elements, strategies and the vision to achieve the overall goal of achieving high quality ECCD services.

- **Focus on enhancing the ECCD system.**
- Ensure effective cross-sectoral and multi- sectoral collaboration for ECCD.
- **Increase access to ECCD and raise the quality of ECCD.**
- Ensure that children with disabilities and special education needs access high quality ECCD.
- **Prioritise the generation of data and the use of evidence to enhance ECCD.**

Outcome

All children from birth to age eight have access to high quality ECCD services. Special consideration is given to children who are at risk of poor development because of socio-economic disadvantage, special needs or other circumstances leading to vulnerability.

Strategies to Effect Change

- Disseminate Bhutan's definition of ECCD.
- Context-sensitive advocacy campaigns to increase
- demand for ECCD.
- Increase access to ECCD services.
- Increase funding of ECCD and consider different funding
- Leverage resources.
- Meet professional development needs of ECCD service providers.
- Focus on enhancing the ECCD system through expediting cross-sectoral collaboration and a multi-sectoral approach.

Enablers

Adequate funding; Good governance; Effective management; Effective data management and utilization

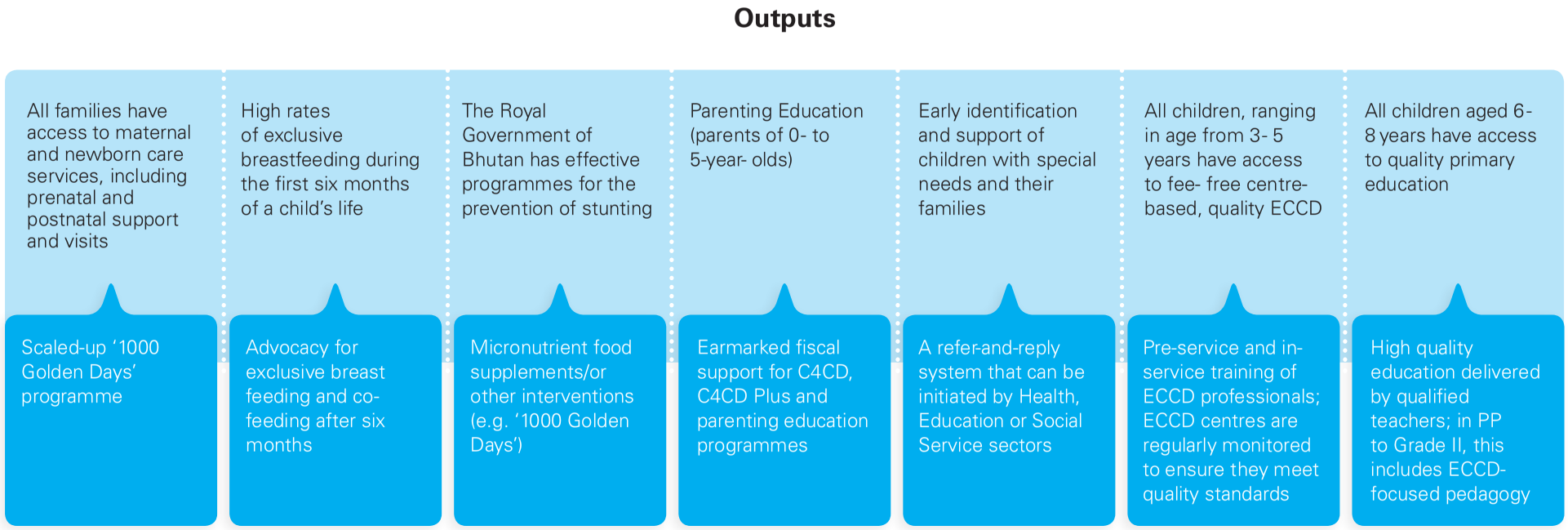


Figure 9 Theory of Change model

This Theory of Change assumes that ECCD will continue to remain a high priority area of the Government with increasing investments in the sector. It emphasises that education needs to take a life-cycle approach, investing in early years to create solid foundations through ECCD programmes. It assumes that investment in education is adequate, resource allocation is rights-based, gender-responsive, and inclusive.

8 Limitations

There are limitations to this evaluation.

1. The empirical study used a cross-sectional design which precludes making causal inferences about the relation between ECCD centre attendance and child outcomes. Further, children were not assessed directly and the evaluation team relied on parent report about child development. A longitudinal study with direct assessment of child outcomes would yield more robust conclusions.
2. Policymakers were not surveyed, and their perspectives are important in attaining the study objectives. That stated, this evaluation provides valuable information about ECCD in Bhutan and the findings set a baseline to compare the effectiveness of ECCD policy and practice.
3. Parent-reported exclusive breastfeeding data should be interpreted with caution as parents may have confounded the provision of breastmilk with exclusive breastfeeding. Similarly, where parents reported paying for health services or ECCD participation, the study design prevented the evaluation team from clarifying what parents deemed to be payment. It should be noted that in Bhutan, health services and ECCD are fully funded by the Government.
4. The support schools may need to provide better parenting education, and to better support the home learning environment, was not investigated. Similarly, the opinions of ECCD facilitators, CMC secretaries and DEOs regarding priorities for ECCD centre refurbishment and resourcing were not sought.
5. One of the purposes of this evaluation was for the evaluation team to suggest innovative and sustainable alternative ECCD models for Bhutan. While a few options are presented, the evaluation team is unable to present conclusive evidence that would support the proposal of a contextually appropriate, alternative model. Rather, the evaluation team proposes that Bhutan explore models currently in operation in similar contexts and then investigate whether the intended model will increase access in a cost-effective manner.

9

Lessons learnt

This large evaluation project was completed within four months.

1. Strong in-country data collection expertise was essential to provide ongoing support to numerators, to manage data collection logistics, and to liaise closely with the evaluation team project manager. While close communication was maintained between the evaluation team project manager and the in-country consultant – at times, several times in one day – a weekly videoconference between the in-country consultant and the evaluation team, structured around a feedback template, supported efficient and timely responses to questions as they emerged.
2. Requiring in-country communications between the clients (MoE and UNICEF Bhutan) and the in-country consultant to be directed through the evaluation team project manager supported efficient project management.
3. UNICEF's parent report ECDI measures of child outcomes rather than direct assessment were used with the parents of 3- to 5-year-olds. These measures have undergone rigorous tests of reliability and validity in many different contexts, and indeed also demonstrated excellent reliability in this study. Nevertheless, further research using direct assessment measures of child outcomes in Bhutan could provide an interesting point of comparison with the outcomes based on parent report presented here.
4. Since ECCD in Bhutan is multi-sectoral with multiple agencies involved, coordinating the role and participation of multiple agencies was challenging in this evaluation and may be challenging in enacting the evaluation teams recommendations. To this end, a strong, representative reference group, each of whom has decision-making authority, is necessary in order to maintain momentum in projects of this scope and importance.

5. Inevitably, an evaluation of this nature reveals further research priorities. Included in these are the following:
    - A systematic impact assessment is necessary to gather empirical data on effective supports for child outcomes. Longitudinal research to track student trajectories over time would provide important evidence to inform strategic planning.
    - The explicitness of the Curriculum Implementation Guide to effectively guide ECCD facilitators' practice should be investigated.
    - The quality of teaching practice enacted in ECCD centres should be assessed in order to develop targeted facilitator professional development. Here, mobile community-based centre programmes need to be evaluated as well, paying particular attention to implementation fidelity and understanding of the daily schedule by the volunteers who staff it on days when the facilitator is in another village.
    - The nationwide Parenting Education roll-out was only completed in 2019. Assessing the longitudinal impact of parenting education is important.

10

Recommendations

Noting that there is political will to improve both access to and quality of ECCD in Bhutan, the following recommendations were made. They are based on:

- Findings from the documentary analysis, surveys, interviews and observations conducted for this study;
- Evidence-based recommendations from the global literature on promoting ECCD in low- and middle-income countries; and
- Valuable feedback from the Evaluation Reference Group as well as feedback from consultation with relevant national stakeholders for this study.

Key findings

The key findings from the documentary analysis, surveys, interviews and observations conducted for this study are shown below.

1. ECCD-related policies in Bhutan are aligned to the Nurturing Care Framework.
2. A common understanding of ECCD and its benefits is not prevalent among stakeholders.
3. Access rates to centre-based ECCD remain low.
4. ECCD participation is positively associated with child outcomes as measured by parent report.
5. National data indicate a high prevalence rate of disability among young children.
6. Findings suggest that crèche caregivers and centre facilitators, and health workers want more opportunities for targeted professional development.
7. Not all ECCD centres met national quality standards for ECCD centres.

Key recommendations

1. Implement a whole-system approach to ECCD through expedited cross-sectoral collaboration and multi-sectoral approach to enhance the ECCD system
2. Improve the quality of ECCD programmes through capacity development and better learning conditions
3. Increase access for all children to quality and equitable ECCD services
4. Ensure that all children have the best start in life through improved access to maternal and child health support
5. Promote and improve parenting education
6. Address the gap between ECCD planning and implementation
7. Continue to advocate for ECCD participation and development

Detailed Recommendations

1. Implement a whole-system approach to ECCD through expedited cross-sectoral collaboration and multi-sectoral approach to enhance the ECCD system

1.1 Promote collaboration among key ECCD stakeholders by forming multi-sectoral ECCD Steering and Technical Committees.

1.2 Develop a National Multi-sectoral ECCD Strategic Action Plan to guide a whole-system approach towards holistic ECCD planning and implementation.

1.3 Develop a National ECCD Policy aligned to the Nurturing Care Framework to ensure ECCD provisions across all relevant sectors.

1.4 Undertake a systematic analysis of funding models and approaches to explore financing strategies for ECCD to ensure universal access to ECCD services, especially to encourage participation of children from low income families through fully funded programmes.

1.5 Earmark dedicated fiscal support for ECCD in the national and local budgeting system.

1.6 Establish adequately resourced support mechanisms for intra- and intersectoral collaboration, both within and across *dzongkhags*. This would strengthen local-level networks and collaboration.

2. Improve the quality of ECCD programmes through capacity development and better learning conditions

2.1 Raise the minimum qualification for ECCD professionals, including crèche caregivers.

2.2 Ensure that crèche caregivers, ECCD facilitators, health workers have a mandatory requirement of certification to ensure quality delivery of services and support for all children in ECCD programmes, including supporting the needs of children with disabilities.

2.3 Include ECCD in the Technical and Vocational Education Training (TVET) system to increase opportunities for skills development and employment.

2.4 Ensure provision of professional ECCD facilitators training opportunities through a focus on pre-service and continuous in-service training.

2.5 Explore targeted micro-credentialing[4] options in collaboration with in-country and external specialists to equip ECCD professional and service providers with skills to address specific learning and development needs.

2.6 Review and update existing Operational Guidelines for ECCD centres and determine minimum operating standards for all ECCD centres.

2.7 Ensure that all centres are regularly monitored, and appropriate support is provided through relevant stakeholders when minimum standards for both indoor and outdoor learning support in terms of access to teaching and learning resources and learning conditions are not met.

3. Increase access for all children to quality and equitable ECCD services because empirical evidence demonstrates that it is positively related to child outcomes in Bhutan.

3.1. Ensure that physical infrastructure and centre environments meet Operational Guidelines, including the need for inclusive access to ECCD infrastructure and WASH facilities.

3.2. Enhance access to ECCD in accordance with annual targets up to year 2023 through increased establishment of centre-based programme and mobile

[4] Micro-credentials' are short, module-based, online professional development courses that may receive credit towards a qualification from a teacher education institution. These courses can target both subject content areas, interactional quality and operational quality such as health and hygiene standards. Alternatively, a range of existing, freely available, online professional development modules could be recommended.

ECCD facilitator programmes and other alternative ECCD models to reach all children, including those in remote locations.

3.3. Ensure that all children have the opportunity to access fee-free ECCD — communicate clearly to ECCD staff and Centre Management Committees that children from vulnerable backgrounds should not be required to pay any contributions in the community-based ECCD centres.

3.4. Develop a referral-and-reply system for the early identification and provision of developmentally appropriate support to children with special needs and their families that includes health, educational and social services.

3.5. Conduct a national profiling exercise to develop an accurate assessment of the nature of children's special needs and background.

3.6. Ensure that the National Multi-Sectoral ECCD Strategic Action Plan incorporates explicit milestones and an explicit timeframe that will lead towards the mandating of access to quality education and care for children with disabilities and special education needs.

3.7. Explore and expand the provision of nutritious meals to all children attending ECCD programmes. Explore programme to encourage farmer groups providing food to ECCD services. This would also encourage parent engagement with ECCD services in order to assist with food preparation and sensitisation on the importance of child nutrition.

4. Ensure that all children have the best start in life through improved access to maternal and child health support

4.1. Scale up the '1000 Golden Days Programme'. Leverage the '1000 Golden Days' programme to build partnerships with families that are sustained throughout the period of early childhood, continue to promote exclusive breastfeeding, with co-feeding after the first six months of a child's life and strengthen the existing micronutrients food supplement programme.[5]

5. Promote and improve parenting education

5.1. Expand parenting education support through centre-based programmes and platforms such as national television, radio, mobile phones and social media.

[5] **This was introduced in 2019 in collaboration with MoH and UNICEF: http://www.bbs.bt/news/?p=121038**

5.2. Ensure dedicated fiscal support for delivery of parenting education support through ECCD services.

5.3. Develop a collaborative mechanism at national and local levels between health workers, child protection focal points, ECCD facilitators, and primary school teachers to ensure improved transition support for children across different sectors through parenting support by building on existing programmes like C4CD, C4CD Plus, centre-based parenting education.

6. Address the gap between ECCD planning and implementation

6.1. Develop an institutionalised monitoring and evaluation system for ECCD services to ensure that all needs of children are met through quality and equitable ECCD, including crèches

6.2. Establish a systemic evidence-based ECCD planning and implementation process for effective and efficient delivery of ECCD services.

7. Continue to advocate for ECCD participation and development

7.1 Promote a common understanding of ECCD and its benefits through context-sensitive advocacy campaigns, through all media channels, to ensure that all stakeholders positioned within the broader ecological system are aware of the national definition of ECCD. [6]

7.2 Investigate social media and non-data dependent digital platforms for dissemination of basic information on ECCD.

7.3 Explore reasons for non-participation in ECCD and address associated barriers to enhance demand and access for ECCD.

[6] It encompasses services provided to children from birth to 8 years of age. ECCD programme consists of health, nutrition and parenting intervention for children aged birth-two years and the provision of organised early learning and stimulation programme for children aged 3 - 5 years old through centre-based ECCD programme, and formal schooling from 6 - 8 years (Pre-Primary to Grade II).

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Appendices

Appendix A. Evaluation Matrix

Evaluation Criteria	Evaluation Questions	Methods
A. Relevance		
(A1) ECCD services will be considered relevant if the national and local objectives are reflected in devising strategies and planning at both the national and dzongkhag levels.	• How are ECCD objectives reflected in key sectoral/national strategies? • How has the ECCD sector met the national priorities and how are global ECCD priorities contextualised for Bhutan's needs? • Does the existing ECCD programme have a relevant Theory of Change guiding the programmes?	• Secondary data analysis • Interviews with 9 DEOs and 9 DHOs
(A2) ECCD services will be considered relevant if the national and local objectives are reflected in documenting in policies and key documents.	• How are ECCD objectives reflected in policies and planning documents? • How have the ECCD-related policies been devised? To what extent were they evidence-based? • What contextual factors (social, economic, cultural) were taken into consideration in the design/ implementation of ECCD intervention programmes and service provision?	• Secondary data analysis • Interviews with 9 DEOs and DHOs

(A3) ECCD services will be considered relevant if the national and local objectives are reflected in implementing in intervention programmes and service provision.	• How are ECCD objectives reflected in ECCD service provision? • How has the ECCD activities been devised? To what extent were they evidence-based?	• Secondary data analysis • Interviews with 9 secretaries of Centre Management Committees, 9 facilitators, and 9 health workers. • Survey: 20 DEOs, 20 DHOs, 57 secretaries of Centre Management Committees, facilitators of 57 ECCD centres, and health care workers from 27 health care centres
Evaluation Criteria	**Evaluation Questions**	**Methods**
B. Effectiveness		
(B1) We will evaluate the efforts within and across sectors to promote outcomes over time: To determine what were the policies and programmes implemented and whether there were more favourable changes on outcomes after policies and programmes were implemented than the time before.	• What are the efforts made by DEOs, DHOs, and Centre Management Committees to establish an enabling environment for the expansion and improvement of ECCD services? • How has the ECCD programme promoted effective cross-sectoral partnerships (e.g., sections within MoE and MoH) to improve cross-sectoral ECCD coordination? • What is the quality of ECCD service provision in terms of personnel (including ECCD facilitators and health workers)?	• Secondary data analysis • Interviews with 9 DEOs, 9 DHOs, and 9 secretaries of Centre management Committees • Survey: 20 DEOs and 57 secretaries of Centre Management Committees
(B2) ECCD services will be considered effective where outcomes are better for children participating compared with not participating, overall and for each group individually. The evaluation will also take into account of a variety of groups (including vulnerable groups such as those living in rural areas, or in areas with high rates of stunting).	• Do children participating in ECCD have higher or lower child stunting rates/ school readiness at Pre-Primary compared with children not participating in ECCD? Does the answer to this question vary across geographical areas and across demographic groups (including vulnerable groups)?	• Height & weight of children (285 ECCD attending and 285 non-ECCD attending) • Survey: 54 primary school teachers

(B3) Satisfaction with ECCD provision across geographical areas in Bhutan is also assessed: high satisfaction among caregivers with the existing ECCD programmes indicates that these programmes are more effective.	• How satisfied are parents and ECCD service providers with the level and quality of service provision? Does this level of satisfaction vary between geographical areas and across demographic groups, and by the type of ECCD service? • What are parents' and other stakeholders' level of understanding of what constitutes ECCD, and whether such have been covered in the existing programmes?	• Survey: 270 Caregiver (0-3), 285 Caregiver (3-6, ECCD attending), and 285 (3-6 non-ECCD attending), Facilitators from 57 ECCD centres, 57 secretaries of Centre Management Committees, 20 DEOs, 20 DHOs
(B4) Areas that can be improved to enhance the effectiveness of ECCD services across sectors will be identified.	• What are the areas of improvement of ECCD services within and across sectors to enhance effectiveness of ECCD services?	• Survey: 270 Caregiver (0-3), 285 ECCD attending, 285 non-ECCD attending
Evaluation Criteria	**Evaluation Questions**	**Methods**
C. Efficiency		
(C1) High efficiency is indicated by the appropriate and adequate allocation of resources to support the implementation of ECCD programmes to achieve high quality and equity-focused results for children at the national level across and within sectors.	• To what extent are the resources (financial and human resources) allocated to ECCD programmes appropriate and adequate to support the implementation of ECCD programmes to achieve quality- and equity-focused results for children? • What are the cost-effective ECCD models for meeting quality standards, for remote locations and children with disabilities?	• Secondary data analysis • Interview with 9 DEOs and 9 DHOs • Survey: 20 DEOs and 20 DHOs

(C2) High efficiency is indicated by the appropriate and adequate allocation of resources to support the implementation of ECCD programmes to achieve high quality and equity-focused results for children at the dzongkhag level.	• How are resources within dzongkhag allocated to influence improvements in access, quality, equity, and sustainability? What strategies (advocacy, policy, technical, and financial) were most efficient in influencing these improvements? • What is the quality of ECCD services offered by centres with respect to staff-child ratio and staff person hours to child ratios? • Do DEOs, DHOs, and primary school teachers consider ECCD services to run efficiently, or not?	• Interview with 9 DEOs and 9 DHOs • Survey: 20 DEOs, 20 DHOs, and 54 Pre-Primary teachers
(C3) High efficiency is indicated by the appropriate and adequate allocation of resources to support the implementation of ECCD programmes to achieve high quality and equity-focused results for children at the centre level.	• Do ECCD service providers, Centre Management Committees, parents consider ECCD services to run efficiently, or not? • Which areas for improvement ECCD service providers, Centre Management Committees, and parents identify that have the potential to provide more efficient ECCD services?	• Survey: 270 Caregivers (0-3), 285 Caregivers (3-6, ECCD attending), 286 Caregivers (3-6, non-ECCD attending), ECCD facilitators of 57 ECCD centres, health care workers of 27 health care centres, 57 secretaries of Centre Management Committees • Interviews with 9 ECCD facilitators, 9 health care workers, and 9 secretaries of Centre Management Committees • Observation at 57 ECCD centres

Evaluation Criteria	Evaluation Questions	Methods
D. Sustainability		
ECCD services provision is evaluated in terms of whether they are capable of sustaining in the long run, in terms of finances and operation/ environment. Services are sustainable with the presence of long-term policies, funding sources, and work models that encourage continuation of quality service provision.	• What are the opinions of ECCD stakeholders on how sustainable ECCD services are, in terms of (i) environmental/ operational sustainability and (ii) financial sustainability? • What are the principles underlying existing financial models and how scalable are these models (e.g., willingness of parents/families/districts to implement co-financing models)? • What are the views of ECCD stakeholders on how to improve sustainability within and across sectors?	• Survey: 270 Caregivers (0-3), 285 Caregivers (3-6, ECCD attending), 285 (3-6, ECCD non-attending), 57 secretaries of Centre Management Committees, 20 DEOs, and 20 DHOs • Interviews with 9 secretaries of Centre Management Committees, 9 DEOs, and 9 DHOs

Appendix B. Measures

Appendix B1: Centre observation item list

Centre/ School facilities

1 Location of the early childhood facilities
2 Distance in metres between the centre and facilities
3 Hazards
4 Unclean surroundings
5 Noise pollution
6 Conditions of covered space
7 Water available to children
8 Toilet facilities
9 Hygiene
10 Outdoor play area
11 Safety of outdoor play area
12 Outdoor play equipment
13 Evacuation routes

Classroom facilities

14 Classroom size
15 Tables or chair available for children
16 Table or chair available for facilitators
17 Equipment available for gross motor activities
18 Fine motor equipment or supplies available
19 Availability of materials on concept
20 Variety of equipment/ supplies for indoor learning activities
21 Learning corner
22 Storage for play materials
23 Storage available for facilitators
24 Learning-related display
25 Child-produced display
26 Books
27 Indoor play materials

Appendix B2: Caregiver survey (birth to 3 years)

Information about the child

1 Interview information
2 Information about child
3 Child disabilities
4 Usage of aids if child has disabilities
5 Support received if child has disabilities

Usage and views about ECCD services

6 Describing ECCD
7 Perceived quality of education and care provided to child
8 Usage and satisfaction towards antenatal care services
9 Usage and satisfaction towards postnatal services
10 Breastfeeding and exclusive breastfeeding
11 Immunisation
12 Parent counselling programme participation
13 C4CD participation
14 C4CD Plus participation
15 Topics covered and satisfaction towards parent counselling programme
16 Intention of sending child to ECCD centre
17 Considerations of sending child to ECCD centre

Usage and views about crèches

18 Distance from nearest crèche
19 Crèche attendance
20 Reason for not sending child to crèche

Early Childhood Development

21 Early Child Development Index

Parenting Beliefs (Parenting styles and home-based parenting practices)

22 Perceived importance of attributes for child
23 Parental beliefs
24 Expectations of the level of education of child
25 Home-based activities
26 Books at home
27 Source of information on child-rearing
28 Disciplining child
29 Perceived ideal way of disciplining child

About the Family

30 Information about mother
31 Information about father
32 Information about family
33 Household income last month
34 Household income last year
35 Date

Appendix B3: Caregiver survey (3 to 5 years)

Information about the child

1 Interview information
2 Information about child
3 Child disabilities
4 Usage of aids and support received if child has disabilities

Usage and views about ECCD services

5 Describing ECCD
6 Perceived quality of education and care provided to child
7 Usage and satisfaction towards antenatal care services

8 Usage and satisfaction towards postnatal services
9 Breastfeeding and exclusive breastfeeding
10 Immunisation
11 Parent counselling programme participation
12 C4CD participation
13 C4CD Plus participation
14 Topics covered and satisfaction towards parent counselling programme
15 Distance from nearest crèche
16 Crèche attendance
17 Reason for not sending child to crèche
18 Considerations of sending child to ECCD centre

19 to 28: For ECCD attending only

19 Time spent in ECCD centre
20 Main language used at child's ECCD centre
21 Satisfaction towards child's ECCD centre
22 What parents like about child's ECCD centre
23 What can be improved at child's ECCD centre
24 Perceptions towards child's ECCD centre
25 Perceptions towards child's ECCD facilitator
26 Perceived sufficiency of resources in ECCD centre
27 Monthly financial contribution for child's ECCD
28 Appropriateness of opening hours of child's ECCD

Early Childhood Development

29 Early Child Development Index (Part 1)
30 Early Child Development Index (Part 2)
31 Early Child Development Index (Part 3)

Parenting Beliefs (Parenting styles and home-based parenting practices)

32 Perceived importance of attributes for child
33 Parental beliefs
34 Expectations of level of education of child
35 Home-based activities
36 Books at home
37 Source of information on child rearing
38 Disciplining child
39 Perceived ideal way of disciplining child

About the Family

40 Information about mother
41 Information about father
42 Information about family
43 Household income last month
44 Household income last year
45 Date

Appendix B4: Survey for District Education Officers

Beliefs and practices to promote young children's development

1 Describing ECCD
2 Perceived importance of attributes for children in Bhutan
3 Beliefs towards ECCD programmes and policies
4 Views and perceptions towards ECCD services and implementation in the *dzongkhag*

Experience with ECCD services in your dzongkhag

5 Perceived quality of education and care provided to children in Bhutan
6 ECCD priorities for children aged birth to eight in the *dzongkhag*
7 *Dzongkhag* priorities and their alignment with national priorities
8 Enrolment rate in ECCD in the *dzongkhag* and obstacles to participation
9 Views and perceptions towards ECCD centres in the *dzongkhag*
10 Adequacy of resources in the *dzongkhag*
11 Programmes implemented in the *dzongkhag* to improve heath care
12 Effectiveness of ECCD initiatives in the *dzongkhag*
13 Support provided by health centres in the *dzongkhag* for children with disabilities
14 Parenting counselling programmes in the *dzongkhag*
15 Professional development requirement for health workers in the *dzongkhag*
16 Professional development activities provision for health workers in the *dzongkhag*

Background information

17 Working with other sectors/ organisations and perceived effectiveness
18 Number of health centres, health workers in *dzongkhag* per village

Background information

19 DHO information
20 Comments on the provision of ECCD services in Bhutan

21 How could Relevance, Effectiveness, Efficiency, and Sustainability be improved in the *Dzongkhag*
22 Date

Appendix B5: Survey for District Health Officers

Beliefs and practices to promote young children's development

1 Describing ECCD
2 Perceived importance of attributes for children in Bhutan
3 Beliefs towards health care services in the *dzongkhag*
4 Perceptions towards important elements to children's development

Experience with health care services in your dzongkhag

5 Perceived quality of care provided to children in Bhutan
6 Health care priorities for children aged birth to eight in the *dzongkhag*
7 *Dzongkhag* priorities and their alignment with national priorities
8 Utilisation rate of C4CD in the *dzongkhag* and obstacles to usage
9 Views and perceptions towards ECCD centres in the *dzongkhag*
10 Adequacy of resources in ECCD centres in the *dzongkhag*
11 ECCD programmes implemented in the *dzongkhag*
12 Effectiveness of ECCD initiatives in the *dzongkhag*
13 Support provided by ECCD centres in the *dzongkhag* for children with disabilities
14 Parenting education programmes in the *dzongkhag*
15 Professional development requirement for facilities in the *dzongkhag*
16 Professional development activities provision for facilities in the *dzongkhag*
17 Working with other sectors/ organisations and perceived effectiveness
18 Number of centres, children in *dzongkhag* per village

Background information

19 DHO information
20 Comments on the provision of ECCD services in Bhutan
21 How could Relevance, Effectiveness, Efficiency, and Sustainability be improved in the *dzongkhag*
22 Date

Appendix B6: Survey for centre facilitators

Beliefs and practices to promote young children's development

1 Describing ECCD
2 Perceived importance of attributes for children in Bhutan
3 Beliefs towards education and ECCD in Bhutan
4 Facilitator self-efficacy
5 Practices in the classroom
6 Support for children with disabilities

Experience with ECCD services

7 Perceived quality of care provided to children in Bhutan
8 Perceptions towards ECCD centre
9 Curriculum implementation
10 Resources available at the ECCD centre
11 Adequacy of resources in the ECCD centre
12 Support provided by centre for children with disabilities
13 Parenting education programmes provision at the centre
14 What is liked about the ECCD centre
15 What can be improved at the ECCD centre

Professional development

16 Participation in professional development activities
17 Topics included in professional development activities and perceived impacts on teaching

Working with other sectors

19 Working with other sectors/ organisations and perceived effectiveness

Background information

20 Information about the facilitator
21 Information about the class/ group
22 Information about the centre
23 Facilitator training in early childhood education
24 Interest in undertaking Diploma in ECCD
25 Interest in undertaking Bachelor degree in ECCD
26 Comments on ECCD services in Bhutan
27 Date

Appendix B7: Survey for secretary of Centre Management Committee of ECCD centres

Beliefs and practices to promote young children's development

1 Describing ECCD
2 Perceived importance of attributes for children in Bhutan
3 Beliefs about education and ECCD-related policies

Experience with ECCD services

4 Perceived quality of care provided to children in Bhutan
5 Perceptions towards ECCD centre
6 Adequacy of resources in the ECCD centre
7 Support provided by centre for children with disabilities
8 Parenting education programmes provision at the centre
9 What is liked about the ECCD centre
10 What can be improved at the ECCD centre
11 Job requirement of facilitators to attend professional development
12 Arrangement of professional development activities for facilitators

Information about your ECCD centre

13 Information about the centre
14 Enrolment by age
15 Fees for programme attendance
16 Financing the centre
17 Number of facilitators employed at the centre
18 Number of staff employed at the centre
19 Difficulties recruiting qualified staff
20 Allocation of ECCD budget this year
21 Perceived sufficiency of budget for centre daily operation
22 Main learning goals for children
23 Set syllabus/ curriculum to implement

Working with other sectors

24 Working with other sectors/ organisations and perceived effectiveness

Background information

25 Secretary of Centre Management Committee information
26 Training in early childhood education

27 Comments on ECCD services in Bhutan
28 Date

Appendix B8: Survey for health workers

Beliefs and practices to promote young children's development

1 Describing ECCD
2 Beliefs towards health care services in the *dzongkhag*
3 Perceptions towards important elements to children's development
4 Health worker self-efficacy

Experience with health care services

5 Perceived quality of care provided to children in Bhutan
6 Views and perceptions towards the health centre
7 Adequacy of resources in the health centre
8 Support provided by the health centre for children with disabilities
9 Parenting counselling programme provided by the health centre
10 What is liked about the health centre
11 What could be improved at the health centre

Experience with health care services

12 Participation in professional development activities
13 Topics included in professional development activities and perceived impacts on teaching

Working with other sectors

14 Working with other sectors/ organisations and perceived effectiveness

Background information

15 Health worker information
16 Completion of courses
17 Information about health centre
18 Comments on the provision of ECCD services in Bhutan
19 Date

Appendix B9: Survey for Pre-Primary teacher

School readiness

1 Important attributes for school readiness
2 Perceived order of importance of attributes for school readiness
3 Rating of competence on attributes for children who have attended ECCD
4 Rating of competence on attributes for children who have not attended ECCD
5 Perceived quality of care provided to children in Bhutan

Working with other sectors

6 Working with other sectors/ organisations and perceived effectiveness

Background information

7 Teacher information
8 Training in primary education or teaching
9 Students who have attended and not attended ECCD in the Pre-Primary class
10 Comments on ECCD services in Bhutan
11 Date

Appendix B10: Interview protocol for DEO

DEO's role/ background

1 Pre-requisites for DEO appointment
2 Years in present position
3 Professional qualifications
4 Relevant work experience
5 Role of DEO of the *dzongkhag*
6 ECCD-related policies managed
7 ECCD programmes enrolment in the *dzongkhag*
8 Estimation of number of children not attending ECCD programmes in the *dzongkhag*

Centre inspection procedures

1 Frequency of inspection of ECCD centres and primary schools
2 Focus of inspection

ECCD-related policy/issues

1 Defining ECCD

2 ECCD priorities in Bhutan and the *dzongkhag*
3 Development of ECCD-related policies in the dzongkhag
4 Guiding documents for the development of policies
5 Contextualisation of policies for the needs of the *dzongkhag*
6 Challenges encountered in translating policies of Ministry of Education into practices in the *dzongkhag*
7 Encouraging parents to access health care and education for themselves and their children in the *dzongkhag*
8 Parents' satisfaction towards ECCD services
9 Reasons for parents not enrolling their children in the ECCD programmes
10 Measures to encourage parents' continued involvement in children's education
11 Measures to ensure access to ECCD services for vulnerable groups in the *dzongkhag*
12 Measures to provide additional support for inclusion of children with disabilities
13 Cooperating with other departments/ organisations to support ECCD in the *dzongkhag*
14 Describing the cooperation with other departments/ organisations
15 Impact of government ECCD initiatives on improving ECCD in the *dzongkhag*

Financing of education

1 Sufficiency of ECCD centres to accommodate all children in the *dzongkhag*
2 Source of ECCD funding for the *dzongkhag*
3 Decisions that influence allocation of financial resources to ECCD services
4 Decisions that influence allocation of human resources to ECCD services
5 Annual expenditure of the *dzongkhag* per student
6 Aspects of ECCD programmes accounting most of the annual expenditure
7 Determining professional development courses for facilitators
8 Annual expenditure of the *dzongkhag* on professional development for facilitators
9 Whether parents have to pay for ECCD attendance
10 Fees that parents have to pay for ECCD attendance
11 Parents' willingness to pay for the programme

Facilitator training

1 Percentage of ECCD facilitators who received initial training
2 Keeping updated records of ECCD facilitators' initial training in the *dzongkhag*
3 Promotion of facilitator training in the *dzongkhag*
4 Promotion of facilitators' professional development in the *dzongkhag*

Parenting education programme/ intervention

1 Describing parent education programmes/ interventions in the *dzongkhag*
2 Proportion of parents attending parent education programmes/ interventions in the *dzongkhag*
3 Effectiveness of parent education programmes/ interventions
4 Financing parent education programmes/ interventions
5 Challenges in engaging parents

Expert advice

1 Comments on improving ECCD provision in Bhutan

Appendix B11: Interview protocol for DHO

DHO's role/ background

1 Pre-requisites for DHO appointment
2 Years in present position
3 Professional qualifications
4 Relevant work experience
5 Role of DHO of the *dzongkhag*
6 Health care utilisation for children from birth to two years in the *dzongkhag*
7 Health care utilisation for children from three to five years in the *dzongkhag*

Supervision procedures

1 Frequency of centre inspections
2 Aspects of health included in centre inspections
3 Measures taken when health centres are not adequate to pass inspections
4 Policies of peer supervision/ inspection for active health workers

Care for Child Development (C4CD)

1 Defining ECCD
2 ECCD priorities in Bhutan and the *dzongkhag*
3 Development of ECCD policies in the *dzongkhag*
4 Guiding documents for the development of policies
5 Contextualisation of policies for the needs of the *dzongkhag*
6 Challenges encountered in translating policies of Ministry of Health into practices in the *dzongkhag*
7 Encouraging parents to access health care and education for themselves and their children in the *dzongkhag*

8 Parents' satisfaction towards health care services for their children
9 Reasons for parents not taking up health care services for children in the *dzongkhag*
10 Measures to encourage parents' continued involvement in children's education
11 Measures to ensure access to C4CD services for vulnerable groups in the *dzongkhag*
12 Measures to provide additional support for inclusion of children with disabilities
13 Cooperating with other departments/ organisations to support ECCD in the *dzongkhag*
14 Describing the cooperation with other departments/ organisations
15 Impact of government child health and development initiatives on improving child health and development in the *dzongkhag*

Financing of health services for children

1 Sufficiency of health centres to accommodate all children from birth to eight years in the *dzongkhag*
2 Funding source for the health centres in the *dzongkhag*
3 Decisions that influence allocation of financial resources to health centres for children from birth to eight years
4 Decisions that influence allocation of human resources to health centres for children from birth to eight years
5 Annual expenditure of the *dzongkhag* per child receiving services at a health centre
6 Aspects of health care services accounting most of the annual expenditure
7 Determining professional development courses for health workers
8 Annual expenditure of the *dzongkhag* on professional development for health workers
9 Whether parents have to pay to receive health care
10 Services parents have to pay for
11 Government subsidy for the services

Health care worker training

1 Supply of health workers in the *dzongkhag*
2 Percentage of health workers who received initial training
3 Keeping updated records of health workers' initial training employed in the *dzongkhag*
4 Promotion of health workers' professional development in the *dzongkhag*

Parenting education programme/ intervention

1 Describing parent education programmes/ interventions in the dzongkhag
2 Proportion of parents attending parent education programmes/ interventions in the *dzongkhag*
3 Effectiveness of parent education programmes/ interventions
4 Financing parent education programmes/ interventions
5 Challenges in engaging parents

Expert advice

1 Comments on improving ECCD provision in Bhutan

Appendix B12: Interview protocol for secretary of the Centre Management Committee

CMC secretary's role/ background

1 Role of CMC at the centre
2 Role of the secretary of the CMC at the centre
3 Requirements for members of the CMC at the centre
4 Requirements for facilitators at the centre
5 Years in the present position
6 Educational qualifications
7 Relevant work experience
8 Services offered at the ECCD centre
9 Age of children attending the ECCD centre
10 Number of children attending the ECCD centre
11 Number of hours attended by children each day
12 Number of facilitators employed at the centre
13 Over-time work of facilitators
14 Estimation of adult-child ratio

Views about ECCD services in general

1 Defining ECCD
2 Guiding documents for the implementing policies
3 Challenges encountered in translating policies of Ministry of Education into practices in the centre
4 Addressing the challenges
5 Encouraging parents to obtain health care and education for themselves and their children

6 Efficiency of the health and education services for caregivers and children
7 Impact of the ECCD health and education services on caregiver and children
8 Support provided by the centre for children with disabilities or children from vulnerable groups
9 Parents' satisfaction towards ECCD services
10 Reasons for parents not enrolling their children in ECCD programmes
11 Cooperating with other departments/ organisations to support ECCD in the *dzongkhag*
12 Describing the cooperation with other departments/ organisations
13 Supporting facilitators' professional development

Financing of education

1 Financing the centre
2 Deciding on the allocation of resources for the centre
3 Sufficiency of resources at the centre
4 Whether parents have to pay for ECCD attendance
5 Fees that parents have to pay for ECCD attendance
6 Parents' willingness to pay for the programme

Parenting education programme/ intervention

1 Describing parent education programmes/ interventions at the centre
2 Parent attendance
3 Effectiveness of parent education programmes/ interventions
4 Financing parent education programmes/ interventions
5 Challenges in engaging parents

Expert advice

1 Comments on improving ECCD provision in Bhutan

Appendix B13: Interview protocol for centre facilitators

Facilitators' role/ background

1 Facilitator's role
2 Working hours per week at the centre
3 Additional work hours
4 Qualification requirements for facilitators at the centre
5 Number of years in present post
6 Educational qualifications

7 Programmes offered, number of children and facilitators at the centre
8 Age of the children in class

Views about ECCD services in general

1 Defining ECCD
2 Perceptions towards benefits of ECCD services for children in Bhutan

Views about ECCD centre

1 Effectiveness of programmes at the centre
2 Sufficiency of resources for teaching and learning at the centre
3 Children with disabilities at the centre
4 Support provided by the centre for children with disabilities
5 Impact of attending ECCD programme at the centre on children's learning and development
6 Fees that parents have to pay for ECCD attendance
7 Parents' willingness to pay for the programme

Professional development programmes

1 Professional development activities other than initial facilitator training available
2 Participation in professional development activities after completing initial training
3 Professional development programmes attended
4 Application of learning in teaching practice

Parenting education programme/ intervention

1 Describing parent education programmes/ interventions at the centre
2 Effectiveness of parent education programmes/ interventions

Expert advice

1 Comments on improving ECCD provision in Bhutan

Appendix B14: Interview protocol for health workers

Health worker's role/ background

1 Health worker's role
2 Working hours per week at the centre
3 Qualification requirements for facilitators at the centre
4 Number of years in present post
5 Educational qualifications

6 Relevant work experience
7 Details of relevant work experience
8 Types of work involved
9 Services offered, and age of children who receive services at the centre

Views about ECCD services in general

1 Defining ECCD
2 Perceptions towards benefits of Care for Child Development (C4CD) services for children in Bhutan

Views about the health centre

1 Effectiveness of programmes at the health centre
2 Sufficiency of resources at the health centre
3 Children with disabilities at the health centre
4 Support provided by the health centre for children with disabilities
5 Impact of attending C4CD programme at the centre on children's development
6 Fees that parents have to pay for health care services
7 Services that parents pay for
8 Government subsidy for services

Professional development programmes

1 Professional development activities other than initial training available
2 Participation in professional development activities after completing initial training
3 Professional development programmes attended
4 Application of learning in practice

Parenting education programme/ intervention

1 Describing parent education programmes/ interventions at the centre
2 Effectiveness of parent education programmes/ interventions

Expert advice

1 Comments on improving ECCD provision in Bhutan

Appendix B15: Interview protocol for crèche caregivers

Crèche caregivers' role/ background

1 Crèche caregivers' role
2 Working hours per week at the centre

3 Additional work hours
4 Qualification requirements for facilitators at the centre
5 Number of years in present post
6 Educational qualifications
7 Programmes offered, number of children and facilitators at the crèche
8 Age of the children in the group

Views about crèche services in general

1 Defining ECCD
2 Perceptions towards benefits of ECCD services for children in Bhutan
3 Perceptions towards benefits of crèche services for families in Bhutan
4 Perceptions towards benefits of crèche services for children in Bhutan

Views about the crèche

1 Effectiveness of programmes at the crèche
2 Sufficiency of resources at the crèche
3 Provision of food for children attending the crèche
4 Children with disabilities at the crèche
5 Support provided by the crèche for children with disabilities
6 Impact of attending this crèche on children's learning and development
7 Fees that parents have to pay to attend crèche
8 Parents' willingness to pay for the crèche

Professional development programmes

1 Requirement to undertake initial training before becoming a facilitator in the crèche
2 Participation in professional development activities after completing initial training
3 Professional development programmes attended
4 Application of learning in practice

Parenting education programme/ intervention

1 Describing parent education programmes/ interventions at the crèche
2 Effectiveness of parent education programmes/ interventions

Expert advice

1 Comments on improving ECCD provision in Bhutan

THE UNIVERSITY OF HONG KONG

香 港 大 學

September 3, 2019

Professor Nirmala Rao
Faculty of Education

Dear Professor Rao,

Application for Ethics Approval
HREC's Reference Number:**EA1907028**

I refer to your application for ethics approval of your project entitled "An Evaluation of the Early Childhood Care and Development Programme in Bhutan".

2. I am pleased to inform you that the application has been approved by the Human Research Ethics Committee (HREC) regarding the ethical aspect of the above-mentioned research project, and the expiration date of the ethical approval is September 2, 2023.

3. Starting from April 1, 2015, the HREC's reference number of your project (i.e. EA1907028) has to be shown in all materials sent to potential and actual participants to enable participants to link the materials to an approved project.

4. You are reminded to report to the Committee any amendments and new information on the project. Any deviation from the study protocol or compliance incident that has occurred during a study and may adversely affect the rights, safety or well-being of any participant or breaches of confidentiality should be reported to the HREC within 15 calendar days from the first awareness of the deviation/incident by the PI. Application for amendment(s) of an approved project including project extension should be submitted using a prescribed form which can be downloaded from the Research Services homepage (http://www.rss.hku.hk/integrity/ethics-compliance/hrec). Application for extension should be submitted well before the initially approved expiration date.

Yours sincerely,

T.S. Veitch

Professor T.S. Veitch
Chairman
Human Research Ethics Committee

c.c. Dr. B.D. Richards, Faculty of Education
Dr. W.Y.S. Chan, Faculty of Education
Dr. C.S. Cohrssen, Faculty of Education
Dr. P.L.D. Lee, Faculty of Education
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Appendix C: Human Research Ethics Approval

Appendix D: Empirical measures

Appendix D1: Parent surveys - key measures

Data from the parent surveys of children aged birth to 72 months was used to create several key measures.

Child development

For each child, an overall Early Childhood Development Index (ECDI) score was created based on the mean of all the child development items, scaled from 0 - 1. For children aged 3- 5 years the items were based on UNICEF's ECDI questions, and for children aged birth to two years the items were extracted by the HKU team from the Bhutan Child Development Screening Tool. Most items consisted of a binary 'yes/no' response, and where items had more than one possible response they were rescaled as 0 - 1. In all cases 1 represented a positive answer in terms of the child's development, and 0 represented a negative answer. The overall ECDI score was therefore also scaled 0 - 1 with higher scores indicating more advanced child development. A Cronbach's alpha score of 0.96 for birth to 2-year-olds and 0.86 for 3- to 5-year-olds indicated good scale reliability.

Children's age, gender, and ECCD participation

Child age was calculated by subtracting their date of birth, as reported by their caregiver, from the date when the caregiver survey was carried out and their height and weight measurements were taken, giving an age score in months. Gender was reported by the parent, and ECCD attendance was recorded based on whether the child was part of the ECCD sample (recruited from within each ECCD centre), or outside this sample.

Parental socioeconomic status

Maternal education was reported as part of the caregiver survey, based on the mother's highest qualification ranging from no formal qualifications to master's degree or higher. Household wealth was calculated from questions in the caregiver survey on household asset ownership, such as owning a mobile phone, refrigerator, or computer. The first component of a principal components analysis was used to generate weights for each item, and from these weights an index representing household wealth was calculated, following the technique outlined by Filmer and Pritchett (2001).

Stunting

Stunting is the chronic restriction of a child's growth potential due to chronic undernutrition. It affects an estimated 155 million children globally and puts them at risk of not reaching their developmental potential (Black et al., 2017). Children are considered to be stunted if their height-for-age is more than two standard deviations below the WHO Child Growth Standards median (World Health Organization, 2019), and rates of stunting are typically reported for children aged 0 - 59 months (UNICEF, 2017). In this study, data on children's height were collected alongside the survey of parents of children aged 3 - 5 years. Height data were compared to the WHO Child Growth Standards to create an indicator of stunting for children aged 36 - 59 months.

Breastfeeding

Parents of children aged 3- 5 years reported on the time they spent exclusively breastfeeding their child, and these responses were correlated with the child's ECDI score.

Appendix D2: Pre-Primary teacher surveys

Pre-Primary teachers gave their views on the school readiness of children who had attended ECCD compared to children who had not attended ECCD. From a list of 18 competencies teachers were asked to rate children's competence when they entered primary school. On average, teachers rated children who attended ECCD as 'very competent' in 31% of these competencies. A further 43% of responses indicated children who attended ECCD were 'quite competent.' By contrast, just 5% of teacher responses rated children who had not attended ECCD as 'very competent,' with only 8% of responses rating children as 'quite competent.' From the primary school teacher questionnaires, it was therefore clear that teachers considered children who had attended ECCD to have a higher level of competence when they entered primary school compared to those who had not attended ECCD.

Of the individual characteristics Pre-Primary teachers thought were most important for school readiness, independence and self-confidence were commonly stated as most important. Of the 22 teachers, 11 chose independence as most important for school readiness, 9 chose self-confidence, 1 chose social competence, and 1 chose *Dzongkha* language skills.

Appendix E: Supplementary information on survey findings

Appendix E1: Parent survey (3- to 5-year-olds) - breastfeeding

Ninety per cent of parents reported exclusively breastfeeding up to six months of age,

meeting the international recommendation (World Health Organization, 2011). These data should be interpreted with caution as 'exclusive' breastfeeding may have been misunderstood by respondents (see Chapter 8. Limitations).

However, for those parents of 3- to 5-year-olds reporting shorter durations of exclusive breastfeeding there were significant differences in ECDI scores compared with longer breastfeeding durations. Table 16 confirms these findings in Figure 7 by comparing ECDI scores of children who received breast milk for under or over different durations of time. Significant differences were found between children receiving breastfeeding beyond 8 months and those receiving breastfeeding for fewer than 8 months. The largest differences were found for children who received the shortest breastfeeding durations, but the benefit of breastfeeding up to 12 months was very nearly statistically significant (p = .051).

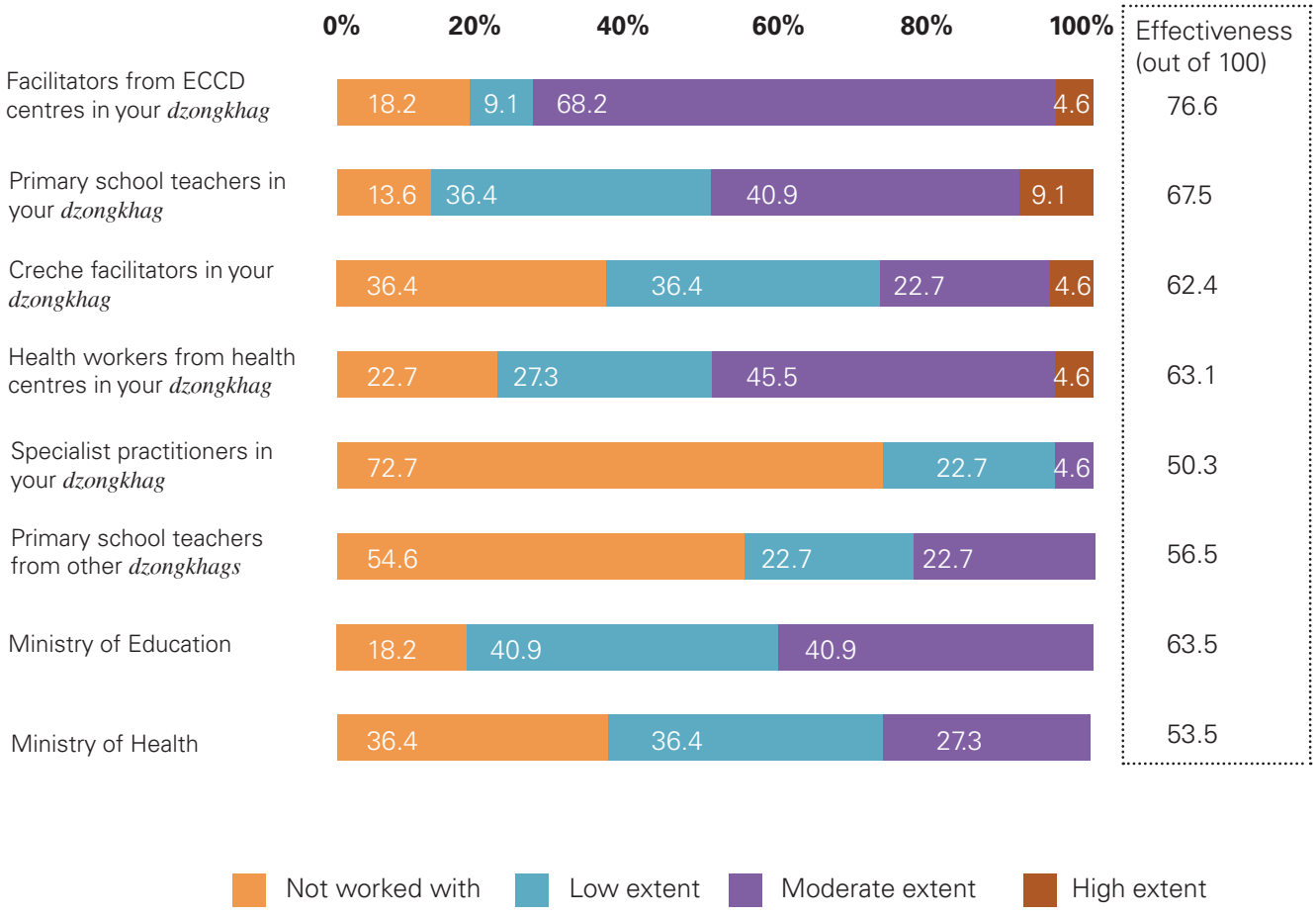
Findings encouragingly suggest high rates of exclusive breastfeeding in Bhutan, but also highlight substantial disadvantages for those children who do not receive breastfeeding, especially at the youngest ages. Findings suggest that exclusive breastfeeding is associated with positive child outcomes at least up until 8 months, and possibly up to 12 months. One way of improving ECCD services and to enhance their effectiveness could be to ensure that all children receive exclusive breastfeeding, especially in their first 6 months.

Table 16 Association between ECDI scores and parent-reported exclusive breastfeeding

	N	Coeff	P
Under 4 months	30	0.12	< .001
Under 5 months	38	0.13	< .001
Under 6 months	54	0.10	< .001
Under 7 months	177	0.06	0.001
Under 8 months	186	0.04	0.025
Under 9 months	188	0.04	0.054
Under 10 months	193	0.03	0.184
Under 11 months	198	0.03	0.107
Under 12 months	201	0.04	0.051
Under 13 months	214	0.02	0.364
Under 14 months	217	0.02	0.373

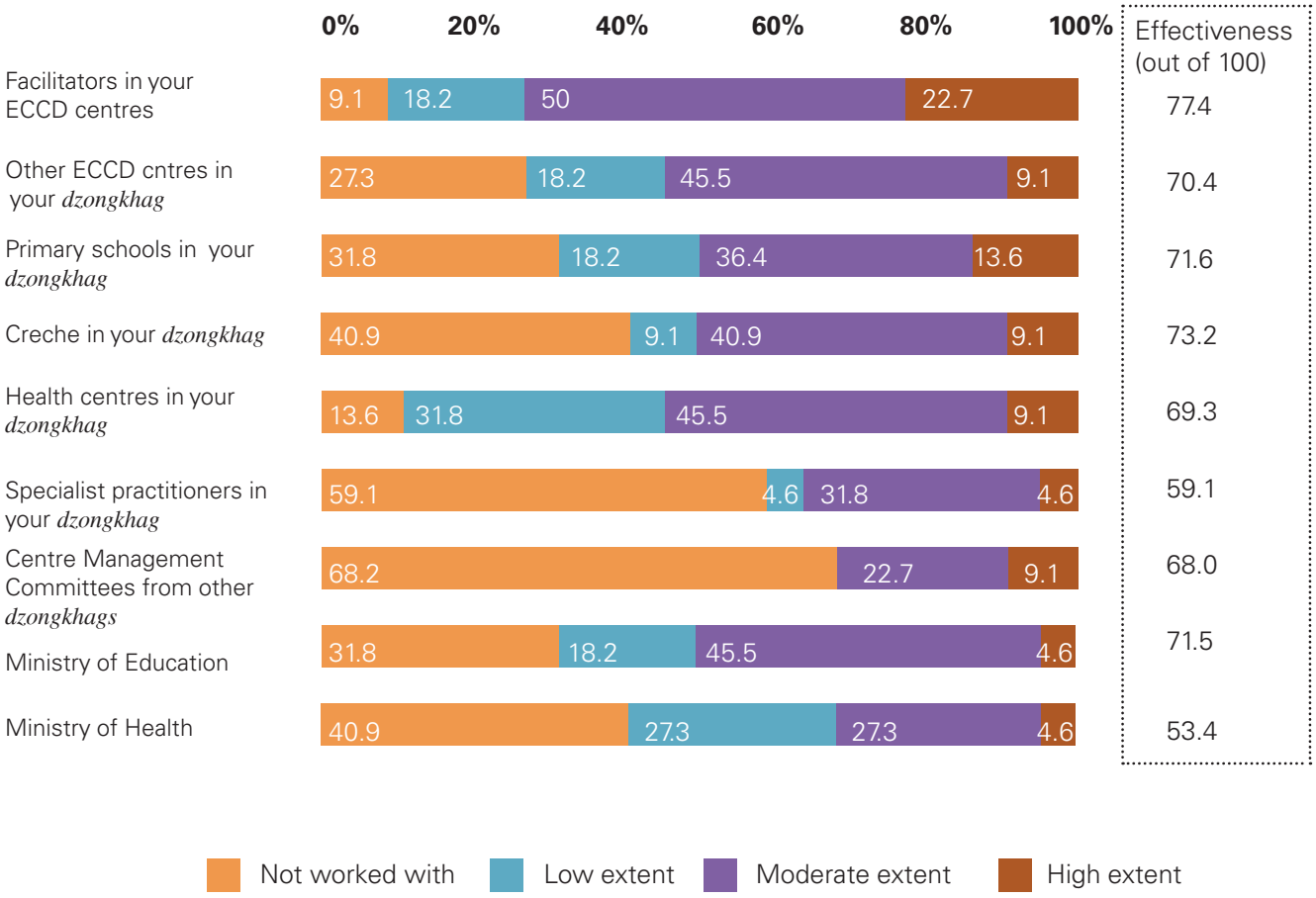
Appendix E2 Tables on multi-sectoral coordination

Figure 10 Pre-Primary teachers' collaboration with others



(Statistics given are % of responses), and the effectiveness of the coordination (rated as 0 to 100) (n=22)

Figure 11 CMC secretaries' collaboration with others



(Statistics given are % of responses), and the effectiveness of the coordination (rated as 0 to 100) (n=22).

Appendix F: Summary of Stakeholder Interviews

	Ratios / ages of children	ECCD definition	Qualifications	
Crèche caregivers	Variable: 1:3 to 1:9 Children from 6 m to 5 yr	• Learning and development. • Health care not included. • Children aged 3 years and above	• All met or exceeded minimum qualification requirements. • Additional training required for facilitators to be able to meet the needs of vulnerable children such as children with disabilities and from low income families.	
Centre facilitators	Variable: 1:8 to 1:24 Children from 3 to 5/6 yr	• Focuses primarily on education. • Preparation of children for formal education.	• Eight had met minimum qualification requirements. One respondent has completed lower secondary school only. • Increased funding needed for resources. • Need for professional learning opportunities.	

	Relevance	Effectiveness	Efficiency	Sustainability
	• Only in Thimphu.	• Cater for typically-developing children only.	• Financed entirely by parents. • Unequal resourcing contributes to differing quality.	• Improved job security and increased PD opportunities required. • Most parents would pay more.
	• More ECCD centres required (particularly in geographically remote areas).	• ECCD services are effective or very effective. • Improvement in children's learning and development observed. • Quality and impact of additional support for children with disabilities or children from vulnerable groups needs to be assessed. • Parenting education programmes effective but constrained by need to advocate more effectively to all parents. In one case, low literacy levels of parents may reduce programme effectiveness.	• Insufficient teaching and learning resources reported in four centres. • Inadequate water access hampers hygiene practices at one centre.	• Monthly enrolment fees ('contributions') are highly variable across centres. • Seven of the nine facilitators believe that parents would pay more for ECCD services. • Need to raise parental awareness of the benefits of attending ECCD programmes.

	Ratios / ages of children	ECCD definition	Qualifications	
Secretaries of CMCs	Confirmed variable ratios of 1:3 to 1:20	• Focuses primarily on education as preparation of children for formal education. • Improves social skills. • Health care not included. • Benefits uneducated parents and working parents.	• Eight of nine secretaries met or exceeded minimum qualifications. (One did not respond.)	
DEOs		• Health and education included in definitions of ECCD.	• Most DEOs had many years' experience in their roles.	

	Relevance	Effectiveness	Efficiency	Sustainability
	• More ECCD centres required. • No specific budget allocation for parenting education programmes. • Five of nine reported insufficient support for children with disabilities and those from vulnerable groups.	• 'Beneficial' and 'positive' cooperation with other departments and organizations. • Children who attended centres were reported to outperform their school classmates. • Need to address factors contributing to the non-enrolment of children in centres. • Quality and impact of additional support for children with disabilities or children from vulnerable groups needs to be assessed.	• Need more ECCD centres and to upgrade existing centres. • Need to increase facilitator salaries and financial support for centres. • Need to improve centre monitoring. • Need to enhance inclusiveness. • Need to provide safe drinking water facilities, toilet facilities and funds to provide children with lunch. • Need to upgrade facilitators' training and professional development.	• Difficult to implement MoE guidelines (funding and facilities are obstacles).
	• Variable contextualisation of operational guidelines e.g. challenged to meet 1:15 ratios, to achieve standardized terms of employment for facilitators. • Need for additional ECCD centres (particularly in geographically remote areas). • Need to standardize facilitators' terms of employment.	• Cooperating with other departments and organizations. • Satisfied with ECCD quality, but need for additional centres. • Variable rates of appropriately qualified ECCD facilitators. • Professional development courses are offered once or twice each year to facilitators including PD on SEN. • Variable child enrolment rates. • Parenting education training benefits families (esp. in remote areas) but participation is highly variable.	• Child ECCD services free of cost to parents. • Annual expenditure per child highly variable (when known). • Funding of parenting education programmes highly variable. • Dzongkhag-level investment in ECCD facilitator PD variable; seven DEOs reporting it to be insufficient to meet needs.	• Additional funding required for professional training and infrastructure improvements in centres. • Need to reduce facilitator: child ratios. • Need to raise parent awareness of benefits of ECCD attendance. • Need to establish additional mobile ECCDs in remote villages. • Need for improved parenting education programmes. • Need to extend stakeholder engagement.

	Ratios / ages of children	ECCD definition	Qualifications	
Health workers	Variable: Children of all ages Birth to 3yr Birth to 5yr Birth to 8yr Birth to 12yr	• Overall, a focus on health, education and wellbeing for children aged birth to 6 years. • However, some definitions within this were very narrow or very broad.	• Only four met minimum qualifications, although all were experienced in their roles.	
DHOs		• Variable ECCD definitions included immunisation, exclusive breast feeding; regular health check-ups, stimulation of learning and development across all domains. • Providing care for children aged three to five years.	• Seven of the nine held bachelor's or master's degrees; all have many years' experience in the health sector.	

	Relevance	Effectiveness	Efficiency	Sustainability
	• Only four health centres providing care to children with disabilities. No specific interventions available at these centres. • Four health workers reported no experience in dealing with children with disabilities.	• Health services reported to be 'effective' or 'very effective' by eight health workers. • Parent education programmes described as effective. One health centre did not offer any parent education programmes • C4CD described as effective by six health workers.	• Seven health centres were reported to be adequately resourced. • Parents required to pay for health care services for children at two health centres.	• Need to employ more trained health workers for ECCD centres. • Need for PD for existing health workers. • Need for improved coordination of C4CD and ECCD interventions by the ministries of health and education.
	• Role of DHO is to implement MoH policy. • Need for specific *dzongkhag*-level guidelines.	• Cooperating with other departments and organisations. • Parents satisfied with health care services, but impact assessment needed. • Variable child access to health care. Higher access in birth to two-year-old phase, thereafter a dropoff (particularly in one *dzongkhag*). • Reduced mortality rate in infants and children under 5 yr. • Antenatal counselling and parent education leading to increase in immunization and assessment, improved school performance and gains in children's social and physical abilities. • Not meeting the needs of children with additional needs and those from vulnerable backgrounds.	• Health care for children is provided free of charge. • *Dzongkhag*-level investment in child health care not available, but seven DHOs reported funding to be insufficient to meet needs. An added obstacle is a shortage of trained health workers. • Parent education programmes are effective but appear to have no specific budget allocation and are funded by parent donations and/or health workers' travel budgets. • Eight DHOs reported that all health workers receive initial training in their *dzongkhag*; five DHOs stating also that funding for health workers' PD reported to be insufficient.	• Dedicated C4CD budget needed. • Specific budget needed for parent Education programmes. • Additional trained health workers needed. • Establishment of additional private ECCD centres proposed. • Greater collaboration between the MoH and ECCD centres. • Clear guidelines about ECCD service provision necessary. • Need to equip health centres with adequate playground facilities accessible to all children, including those with additional needs. • Need to maintain uniform quality standards in public and private ECCD centres. • Proposed that ECCD facilitators be enabled to work in BHUs.

Appendix G: Class observation tables

Table 17 Sets of outdoor materials (per 10 children) observed in ECCD centres

	Sets required for a group of 10 children as per the Operational Guidelines of ECCD Centres	Mean	SD
(a) Slides	2	0.82	0.72
(b) Swings	2	1.23	1.17
(c) Seesaw	2	0.77	0.71
(d) Sandpit	1	0.32	0.28
(e) Balls	3	1.79	4.13
(f) Items for sand and water play	2	1.00	2.00

Note. The numbers presented in the table are based on the number of equipment observed divided by tens of children enrolment data.

Table 18 **Ratings of classroom facilities and resources at ECCD classrooms**

	n	Rating 1 Facilities/ resources not available	
Classroom size	58	0	(0.00%)
Tables or chairs for children	56	46	(82.14%)
Tables or chairs for facilitators	59	28	(47.46%)
Gross motor equipment	59	1	(1.69%)
Fine motor equipment	58	0	(0.00%)
Materials on concept	58	2	(3.45%)
Learning corner	59	2	(3.39%)
Storage for play materials	59	3	(5.08%)
Storage for facilitators	59	14	(23.73%)
Learning-related displays	59	8	(13.56%)
Child-produced displays	58	14	(21.14%)
Books	59	6	(10.17%)

Note. Number of centres are presented under each rating category. Percentage of centres in parentheses. Classroom facilities of randomly for learning and play, and displays in the classrooms. Rating 1 indicates that the facilities or resources were not available, Rating 2 indicates that the facilities and resources were available and in good conditions, adequate, or appropriate.

Minimum	Maximum	Number of centres meeting the minimum requirement	Number of centres not having the equipment
0.00	4.00	7 (11.86%)	3 (5.08%)
0.00	6.43	13 (22.03%)	6 (10.17%)
0.00	3.75	5 (8.47%)	9 (15.25%)
0.00	1.00	4 (6.78%)	15 (25.42%)
0.00	30.00	11 (18.64%)	18 (30.51%)
0.00	8.82	12 (20.34%)	35 (59.32%)

enrolled. Data only included 57 out of 59 centres, two centres were not included because there were missing

Rating 2 Some are available, but some are in poor conditions or inadequate or inappropriately displayed		Rating 3 Facilities available and in good condition/ sufficient resources available or appropriately displayed	
29	(50.00%)	29	(50.00%)
4	(7.14%)	6	(10.71%)
14	(23.73%)	17	(28.81%)
45	(76.27%)	13	(22.03%)
28	(48.28%)	30	(51.72%)
25	(43.10%)	31	(53.45%)
41	(69.49%)	16	(27.12%)
25	(42.37%)	31	(52.54%)
27	(45.76%)	18	(30.51%)
20	(33.90%)	31	(52.54%)
16	(27.59%)	28	(48.28%)
26	(44.07%)	27	(45.76%)

selected classrooms were rated on a 3-point scale. These include classroom size, tables and chairs available, equipment and resources available that some of the facilities or resources were available, but some were in poor conditions, inadequate, or inappropriate, and Rating 3 indicates

Table 19 Sets of indoor materials (per 10 children) observed in ECCD centres

	Sets required for a group of 10 children as per the Operational Guidelines of ECCD Centres	Mean	SD
(a) Sets of building	2	1.63	1.27
(b) Items for table activities	10 to 15	1.00	0.97
(c) Games and puzzles	6	1.69	1.03
(d) Small hand-held toys	8	1.72	1.56
(e) Art supplies	10 to 15	3.45	3.13
(f) Dolls with accessories and household items	4	2.10	2.29
(g) Puppets	3	1.83	2.11
(h) Age appropriate books	30	2.70	2.78
(i) Science items	3	0.49	1.02
(j) Video / Audio players	1	0.46	0.40
(k) Musical instruments and drums	4	0.43	0.73

Note. The numbers presented in the table are based on the number of equipment observed divided by tens of children enrolled. Data only

Table 20 Means of quality of classroom facilities, WASH, and condition of covered space by centre type

Centre type	n	Classroom facilities (Total: 3)	WASH (Total: 12)	Conditions of covered space (Total: 3)
Community ECCD	51	2.17 (1.58 – 2.83)	7.48 (4.00 – 11.00)	1.84 (1.00 – 3.00)
Mobile ECCD	2	2.21 (2.08 – 2.33)	7.00 (5.00 – 9.00)	2.00 (2.00 – 2.00)
Private ECCD	5	2.63 (2.50 – 2.83)	10.20 (9.00 – 11.00)	2.60 (2.00 – 3.00)
Workplace-based ECCD	1	2.42	11.00	1.00

Note. Range presented in parentheses.

Minimum	Maximum	Number of centres meeting the minimum requirement	Number of centres not having the material
0.00	5.00	19 (32.20%)	1 (1.69%)
0.00	4.00	2 (3.39%)	6 (10.17%)
0.00	4.00	2 (3.39%)	1 (1.69%)
0.00	6.00	2 (3.39%)	11 (18.64%)
0.00	12.50	6 (10.17%)	3 (5.08%)
0.00	10.00	9 (15.25%)	5 (8.47%)
0.00	12.50	11 (18.64%)	6 (10.17%)
0.00	11.11	2 (3.39%)	7 (11.86%)
0.00	6.00	5 (8.47%)	32 (54.24%)
0.00	2.50	7 (11.86%)	4 (6.78%)
0.00	4.00	3 (5.08%)	29 (49.15%)

included 57 out of 59 centres; two centres were not included because there were missing enrolment data.

Appendix H: Detailed discussion of findings

This evaluation focuses on the impact of ECCD services in achieving national objectives and global priorities specified in the Sustainable Development Goals for children from birth to 6 years. The coming years are of great importance for ECCD interventions in Bhutan, since Bhutan has committed to 50% ECCD coverage by 2024, and 100% coverage of ECCD by 2030.

The purpose of this evaluation was to:

- Assess the relevance, effectiveness, efficiency, and sustainability of the ECCD programme in achieving its desired objectives specified as national priorities in Bhutan's 11th and the ongoing 12th Five-Year-Plans (FYP), the Bhutan Education Blueprint 2014-2024, the Draft National ECCD Policy, the Draft National Education Policy, and global priorities as specified in the SDGs;
- Provide a set of actionable recommendations based on credible findings to enhance multi-sectoral coordination and inform the development of the National Multi-Sectoral ECCD Strategic Plan;
- Suggest innovative alternative and sustainable ECCD models for Bhutan; and
- Formulate systemic and strategic recommendations for strengthening ECCD programmes in the current Country Programme and Bhutan's 12th FYP.

Given the multi-sectoral nature of the ECCD sector in Bhutan, conclusions are presented for interviews, centre observations and surveys. Thereafter, broad recommendations are made.

Stakeholder understandings of 'ECCD'

As a first step, stakeholders were asked to define 'ECCD'. Crèche caregivers regarded ECCD to address learning and development (health care was not mentioned) for children aged three years and above. As stated earlier, the fact that children aged six months to five years were enrolled in crèches blurs the lines of childcare and preschool. Crèche caregivers spoke of the need to improve job security, and to increase PD opportunities. They reported a belief that most parents would be willing to pay more for crèche facilities.

ECCD facilitators and secretaries of CMCs understood ECCD to be primarily education focused, prioritising social skills and preparing children for transition to formal school education (health care was not mentioned). ECCD centre facilitators commented on the

need to raise parent awareness of the benefits to child outcomes of ECCD attendance and seven of the nine respondents reported that families would be willing to pay more for ECCD services, however, it should be noted that monthly fees ('contributions') were highly variable across services. Secretaries of ECCD CMCs reported that funding and the need to simplify MoE guidelines and improve ECCD facilities as priorities for sustained ECCD service provision.

DEOs included health and education in their definitions of ECCD. DEOs reported the need for additional funding for infrastructure improvements, professional development for facilitators, raising parent/caregiver awareness of the benefits of ECCD participation, and improved parenting education programmes. DEOs also spoke of a goal to increase facilitator child ratios, to establish additional mobile ECCDs in remote villages and to extend stakeholder engagement.

Health workers included a focus on health, education and wellbeing for children aged birth to six years, although definitions ranged from very narrow to very broad. The need to upskill existing health workers, to employ trained health workers and to improve coordination of C4CD and ECCD interventions was reported by health workers. Indeed, the proposal was made by a DHO that ECCD facilitators be enabled to work in Basic Health Units and a strategy to support sustainability.

DHOs' ECCD definitions included immunisation, exclusive breast feeding; regular health check-ups, stimulation of learning and development across all domains and the provision of care for children aged 3- 5 years. DHO priorities to support sustained ECCD services – here, reverting to a focus on health care – highlighted budgetary requirements: for parent education programmes, to equip health centres with playground facilities accessible to all children and to support C4CD. Suggestions included establishing additional private ECCD centres, improved collaboration between MoH and ECCD centres and clearer guidelines regarding ECCD service provision.

Relevance

Surveys

Centre facilitators, CMC secretaries, DEOs and DHOs responded to survey questions about their familiarity with ECCD-related policies within their district and for Bhutan more broadly, and the alignment of centre operation with these priorities.

Of centre facilitators (N=100), 83% agreed or strongly agreed with the statement that "I am familiar with the ECCD policies of Bhutan and the district". CMC secretaries (N=22) were asked the same question, and 82% agreed or strongly agreed with this statement. However, 10% disagreed or strongly disagreed with this statement and 9% said they didn't know. Nineteen per cent of CMC secretaries were not familiar with ECCD policies

of Bhutan or the district. It is thus unsurprising that when asked whether, "The operation of our centre aligns closely with the national and district priorities" 23% disagreed or did not know. Read together, these point to the need for improved policy dissemination.

Perceptions about the operation and alignment of *dzongkhag*-level health and education with district and national priorities differed. All DHOs (N=9) agreed or strongly agreed that health centres providing C4CD services in their *dzongkhag* were aligned closely with the district or national priorities. All DEOs (N=15) agreed that ECCD centres were aligned with *dzongkhag* priorities, but 7% did not believe that ECCDs were aligned with national priorities.

Interviews

In evaluating the relevance of ECCD services in Bhutan, the evaluation team was interested in the extent to which national and local objectives are reflected in strategies and planning at national and *dzongkhag* levels. ECCD services are considered relevant when national and local objectives are reflected in the implementation of programmes and service provision. While much has been achieved, priorities for ECCD services now include access to quality ECCD for children with special education, children from low-income households and children with disabilities. This applies to both education and health care services. An associated priority is the provision of professional development to support all ECCD caregivers and facilitators (at crèche and centre levels) and health workers with the knowledge, skills and sensitivity to support inclusion and full participation in education and health services.

Crèche facilities are limited to Thimphu, demonstrating an opportunity for such services to be extended in other areas of the country to support women's participation in the workforce. This could in turn boost household income. ECCD centre facilitators, secretaries of CMCs and DEOs consistently expressed the need for additional ECCD centres in order for all children to access early learning – particularly in geographically remote areas. Adequate resourcing was frequently named: five of the nine secretaries of CMCs interviewed spoke of the need for additional funding to support parenting education programmes and to provide support for the inclusion and participation of vulnerable children such as children with special education needs and children from low income families. DEOs echoed the need for additional ECCD centres and spoke also of the challenges faced in operationalising MoE guidelines. The need to standardise ECCD facilitators' terms of employment was also raised.

During interviews, ECCD facilitators highlighted the need to establish more ECCD centres, particularly in geographically remote areas. The need for improved structural components of quality such as funding for centre operation, as well as space and materials for teaching and learning, additional professional learning opportunities as well as the

systematic monitoring of centre quality were raised by respondents.

Five secretaries of CMCs spoke of the parenting education programmes conducted by centre facilitators focusing on childcare and development and creating awareness of ECCD programmes. Three secretaries reported a lack of knowledge about these programmes. One secretary stated that parent education programmes were not offered in their *dzongkhag*. Despite the reported parental satisfaction, two secretaries reported 'high' attendance, four secretaries reported 'medium' attendance, and three secretaries did not have this information. Three secretaries reported that the programmes were funded by RGoB, funds from central government or the *Gewog* Fund respectively. However, three CMC secretaries reported that there was no specific budget allocation for parenting education programmes in their *dzongkhags*, and parents volunteered to provide food and materials for the programmes. Three secretaries reported having no knowledge of funding sources. Additional challenges to delivering parenting education programmes included unpredictable parent attendance, the non-attendance of fathers (particularly amongst farmers) and distance to centres.

One secretary mentioned that the impact of ECCD services was not good due to insufficient services. However, children who had attended centres were reported to outperform their classmates at school. Reasons for non-enrolment of children in centres were reported to include financial constraints, lack of parental knowledge about ECCD programmes, geographical distance, disinterest in the programme, uneducated parents and divorced parents[7].

Five centres offered no additional support to children with disabilities, children from low income families or children with special education needs. Four centres were reported to offer additional support. The nature of this additional support differed and was described by two centres as their inclusive and safe environment for children with disabilities. One centre offered financial support to low-income families by waiving enrolment fees. One centre was reported to provide extra care to vulnerable children and to help them to become independent. In each instance, evidence of the relevance and impact of these supports is not available.

DEOs reported that ECCD-related policies are developed in accordance with the MoE's ECCD and SEN Division policies. Guiding documents for policy development include Bhutan's Education Blueprint, Early Learning and Development Standards (ELDS), Better Early Learning and Development at Scale (BELDS), Child Development Screening Tools (CDST) and other MoE ECCD guiding documents. The extent to which operational guidelines are contextualised varied – this occurs in five *dzongkhags* and from time to time in

[7] **The significance of marital status to child enrolment was not explained.**

one *dzongkhag*. Challenges to implementing MoE policies were reported to include financial resourcing, meeting the required ratio of 1:15 facilitators to children, difficulties at *dzongkhag* level in negotiating the transfer and placement of ECCD centre facilitators, insufficient cooperation from public and local leaders and a lack of public awareness about the important impact of early childhood education on child outcomes.

Four DEOs described urgent priorities in their *dzongkhags*. These included the need for:

- Increased investment in ECCD to be targeted at professional development of ECCD facilitators, centre-level expenses;
- Standardising of facilitators' terms of employment;
- Achieving and improving facilitator child ratios;
- Increasing the number of ECCD centres in their *dzongkhags*, particularly in geographically remote areas; and
- Aligning *gewog* plans with *dzongkhag* Annual Performance Agreements.

On the other hand, five DEOs spoke of the benefits of government initiatives that had resulted in improvements:

- The establishment of additional ECCD centres;
- Increased opportunities for facilitator professional development;
- Increased local government support for ECCD programmes; and
- Improved awareness of the impact on child outcomes of participation in ECCD, as a means to encourage increased ECCD enrolment and improved child performance following transition to formal school education.

With regard to health services, only four health centres reported providing care to children with disabilities but no targeted interventions were available for such children at those centres. Four of the health workers reported having no experience in providing care to children with disabilities.

Only four health centres reported being attended by children with disabilities. Of these four, one health centre made referrals to paediatricians, further screening and family counselling as part of the support the centre provided to children with disabilities. One health centre reportedly offered preferential treatment to children with disabilities by attending to them first. One health centre was reported to offer any appropriate (unspecified) support to such children. The fourth health worker reported that children with disabilities and their parents were provided with health education and referrals to physiotherapists.

Notably, four health workers reported no experience in dealing with children with disabilities and no specific support available to such children at their health centres. Routine immunisation for disease prevention took place and monitoring of nutrition deficiency would take place should the need arise. The lack of wider support for children with disabilities raises equity related issues with the provision of health care services in Bhutan.

With regard to contextualising MoH policy, DHOs reported their role to be the implementation of policy, rather than the adaptation of policy to context. Instead, DHOs spoke of the need for *dzongkhag*-level guidelines.

In general, DHOs reported that ECCD-related policies are developed by the MoH and the role of the DHO is to implement policy. Relevant guiding documents were reported to include the National Child Health Strategy, MoH guidelines, C4CD guidelines, the Annual Performance Agreement, and the World Health Organization guidelines for childcare. Human resource and financial resources pose challenges to implementing policy at dzongkhag level. The need for specific *dzongkhag*-level guidelines was raised.

Dzongkhag-level ECCD implementation priorities include child immunisation, growth monitoring, screening, health care, C4CD training for health workers, providing C4CD counselling to caregivers for children from birth to two years (and in one instance only, for children up to school-going age). Less frequently mentioned were ensuring access to ECCD services for every child and encouraging institutional, rather than home births.

Effectiveness

Here, the evaluation team sought to determine the efficacy of within- and cross-sectorial collaboration to promote child outcomes. The effectiveness of early learning programmes can be determined by comparing children participating in ECCD with those who do not. Simultaneously, service providers' opinions were sought regarding the efficacy of service and their recommendations of ways in which service provision could be improved.

Crèche caregivers provide a service for typically developing children only and are entirely funded by parents/caregivers using the service. ECCD centre facilitators and secretaries of CMCs described ECCD services as effective, commenting on observed improvements in children's learning and development, stating that children who participate in ECCD programmes outperform their non-ECCD attending peers on transition to school. The effectiveness – for the most part – of parenting education programmes was discussed, as was the beneficial and positive cooperation with government departments and other organisations. However, a need to address factors contributing to the non-enrolment of children in ECCD centres was raised as was the need to assist the quality and impact of additional support provided to children from 'vulnerable' groups and children with disabilities or special education needs.

All centre facilitators described their services as effective or very effective. They reported boosting the child's learning and development resulting in improved social, physical and cognitive skills that prepared them for formal schooling. They also reported associated opportunities for parents to learn about their children. They described the benefits to busy parents having their children attend ECCD services as well as the benefits for children in remote communities in preparation for formal schooling.

Parenting education programmes appear to support centre facilitators connections with families and hence with community. Parenting education programmes were described as effective in equipping parents to become more conscious of their child's health, hygiene and nutritional needs, and to provide better care in the home environment. The need to raise parent awareness of the benefits of attending ECCD programmes was emphasised. One facilitator described the programmes as ineffective due to low literacy levels of some parents.

Seven secretaries of CMCs reported 'beneficial' and 'positive' cooperation with other departments and organisations to improve their services. These departments included the education sector, local government, UNICEF, Bhutan Foundation and Perkins International, parent schools, gewog administration, DNC and the Public Works Department (PWD). Two secretaries reported a lack of similar cooperation of ECCD centres with other departments.

Establishing an enabling environment for high quality education in the years prior to school requires ongoing professional learning. ECCD facilitator training and PD courses were reported to be offered each year, taking the form of refresher courses and workshops, at times led by school teachers. Availability of funds was the primary determinant of PD availability and delivery.

DEOs were similarly satisfied with cooperation between education and other government departments and organisations. DEOs reported satisfaction with ECCD quality but it was apparent that child enrolments vary and the sufficiency of qualified ECCD facilitators is also variable across *dzongkhags*. Whilst ECCD facilitators and secretaries of CMCs spoke of the need for professional development, DEOs reported that PD courses are available once or twice a year. Parenting education programmes run through ECCD services were reported by ECCD facilitators and DEOs as being beneficial to families but the need to advocate for parent participation remains a priority.

Access to quality ECCD programmes, child attendance, parenting education programmes, and the training and professional development of centre facilitators were major themes that emerged during interviews.

All DEOs reported satisfaction with the quality of the ECCD centres in their *dzongkhags*, however, six DEOs commented on the need for additional services to accommodate all children from birth to eight years, particularly for people living in remote areas. Associ-

ated priorities included increasing parent and village head awareness of the benefits of ECCD programmes, encouraging the development of private ECCD centres and encouraging decentralised planning for ECCD programme implementation.

All DEOs reported cooperating with other stakeholders in this regard, naming the MoH, the Ministry of Agriculture and Forestry, UNICEF, Save the Children, RENEW, the Special Education Needs division, the Department of Culture and Environment, and Drugyel Dzong Construction. Eight DEOs reported that these collaborations had contributed to improved programme implementation and the enhancement of child health and safety.

Child enrolment in ECCD programmes is variable. In three *dzongkhags*, 65% or more children are enrolled in ECCD programmes. However, in six *dzongkhags* 65% or more children do not attend ECCD programmes. DEOs attributed non-enrolment to inconvenience (geographical distance from ECCD centres and the burden of packing food), financial constraints and a lack of awareness regarding the positive impact of ECCD programmes on child outcomes.

Efforts are being made to support vulnerable groups' access to ECCD services. These include promoting the benefits of ECCD attendance, establishing mobile ECCDs in remote villages and providing children from low-income families with free early childhood education. To equip centre facilitators to support children with special education needs, eight DEOs reported providing training to facilitators on Rapid Neurodevelopmental Assessment (RNDA) and inclusive education practices. Moreover, ECCD centres are encouraged to seek assistance from schools with Special Education Needs (SEN) centres and from private ECCDs which include children with disabilities.

DEOs spoke of the positive impact of parenting education programmes. Parent participation is highly variable in different *dzongkhags*, ranging from an estimated 90% to 20% of parents. Eight DEOs perceived the parenting education programmes to be effective or very effective; one DEO made no comment. A strength of the parenting education programmes was reported to be their provision of a forum for parents to discuss parenting concerns, to share solutions and to provide support to one another. This was perceived to lead to improved awareness of children's needs and ultimately improved child outcomes. Parenting education programmes were reported to benefit all families but in particular, families living in remote areas.

Training and professional development of centre facilitators was a key priority to emerge in interviews. Five DEOs reported that all ECCD facilitators in their *dzongkhags* had completed initial training. One DEO reported that one-third of the ECCD facilitators in the *dzongkhag* had not undertaken initial training. In the remaining three *dzongkhags*, the percentage of untrained ECCD facilitators was 3%, 5% and 15%.

Professional development courses are usually offered once or twice each year, depend-

ing upon MoE guidelines and the availability of funds. Professional development opportunities take the form of refresher courses, peer mentoring and material development workshops. Which courses are offered is governed by facilitators' existing qualifications, centre needs, children's needs, and available options at the time.

Turning to health care, eight out of nine health workers reported health services to be effective or very effective and their own parent education programmes, including C4CD, to be very effective. DHOs reported that parents are satisfied with health care services but one DHO raised the need for an impact assessment. Antenatal counselling and parent education are contributing to increased immunisation and assessment, improved school performance and gains in children's social and physical abilities. However, concerns were raised that Bhutan is not meeting the needs of children with additional needs and children from vulnerable groups. Further, access to health care for children declines after children reach two years of age.

Continuity of employment of health workers in one community supports relationships with families and hence with the broader community.

One health worker reported health services to be 'ineffective', attributing this to difficulties in meeting the high demand for services at that particular health centre. Eight health workers reported health services to be 'effective' or 'very effective', describing their contribution to children's cognitive development (through supporting children learning to read, recognize shapes and photographs[8]), to children's health and hygiene, and owing to their role in early detection of medical conditions and additional needs. Ease of access to health care was also highlighted.

Parent education programmes were also described as effective: they created awareness about typical child development, contributed to an increase in institutional deliveries (as opposed to home births) and a decrease in maternal mortality. These programmes were described as equipping mothers and caregivers to take better care of their children and to improved hygiene practices (such as washing hands before feeding children). Health care workers reported that children whose parents attended ECCD programmes outperformed children of non-attendants in health and on developmental milestones. In addition, children whose parents attended ECCD programmes were more socially engaged and better prepared for formal schooling.

Six health workers described the benefits of the C4CD programmes offered at health centres. They facilitated early detection of abnormalities, promotion of child health (particularly for children under two years) and improved child cognitive development. However, two health workers reported that the impact of the C4CD programme was inconclusive, one health worker had no knowledge of C4CD and one stated that the health centre was

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[8] **Photographs were specifically mentioned but not explained.**

in the process of assessing its impact.

All DHOs reported that parents were satisfied with the provision of health care services but emphasised the need for an impact assessment.

Variable child access to health care was reported. Seven DHOs reported that 100% of children in their *dzongkhag* from birth to two years received health care. Two DHOs reported 99% and 95% respectively. However, health care provision was markedly more variable for children aged three to five years: 100% in two *dzongkhags*, 98% in one dzongkhag and 90% in three *dzongkhags*. The percentage dropped to 80%, 70% and 50% in the remaining three *dzongkhags*.

Particular improvements in the effectiveness of health care provision were noted:

- A reduction in the mortality rates of infants and children under five in their *dzongkhags* – five DHOs reported a positive impact particularly during the '1000 Golden Days', attributing this to an increase in the number of children being brought to health centres for immunisation and assessment, and the on-going focus on child nutrition.
- Improvement in school performance and gains in children's social and physical abilities.
- Parent education programmes, such as antenatal counselling on childbirth, provide opportunities for parents to share concerns and to become more motivated to ensure timely immunisation and medical consultations.

Focusing on vulnerable groups' access to C4CD services, DHOs reported creating awareness of C4CD services, providing mobile health 'camps' for hard-to-reach populations, providing counselling to mothers, disseminating information about access to special education needs programmes to caregivers, referrals to physiotherapy units and overall monitoring. However, the extent of support targeted at vulnerable groups and children with additional needs was reported to be insufficient. Whilst eight DHOs reported the provision of additional support to children with disabilities, the extent to which this meets children's needs is unclear. Three DHOs described this support as the identification and observation of children with disabilities, followed by discussions with education officers regarding how best to support children's inclusion in activities. C4CD services, eye, and ear, nose and throat referrals were mentioned as was the provision of physiotherapy support. Broader community-oriented approaches were addressed in one instance only: a proposal to redesign children's playgrounds to include children with disabilities had been rejected by government.

Eight DHOs reported cooperating with other organisations to support the health and well-being of children aged from conception to eight years in their *dzongkhags*. These included the education sector as well as the National Statistics Bureau (NSB), Save the Children, Centre for Bhutan Studies, UNICEF and the National Commission for Women and Children (NCWC). Seven DHOs described benefits such as consolidating support for the ECCD centres, enabling them to report disabilities to the education sector, assisting them in initiating health related programmes, establishing regular health check-ups at schools and providing access to NSB data regarding individuals with special needs. (Here, DHOs understanding of 'ECCD centres' appears to be health centres rather than kindergartens.) However, two DHOs reported that collaborative efforts were futile and required improvement.

Efficiency

The evaluation team was interested in the extent to which allocated resources were perceived to be appropriate and adequate to support the implementation of high quality and equity-focused results for children at national, *dzongkhag* and centre level. Staff child ratios were also of interest. Finally, perceptions of efficiency and areas of potential improvement were investigated.

Parents of children attending crèche provide their food and contribute a monthly payment per child that ranges from Nu.1500 to Nu.2600. The financing of crèche facilities is reported to be entirely dependent on parent fees. Each of the nine crèche caregivers interviewed reported the belief that parents would be willing to pay more for crèche services.

Four ECCD facilitators reported insufficient resources for teaching and learning. One facilitator reported that inadequate access to water hampered hygiene practices at the centre.

Secretaries of CMCs offered recommendations to improve ECCD services in Bhutan. These included:

- Establish more ECCD centres, and upgrade existing centre infrastructure and outdoor playgrounds, in both rural and urban areas.
- Increase facilitator salaries and financial support provided to centres (for resources and materials).
- Provide safe drinking water facilities, toilet facilities and funds to provide children with lunch.
- Improve and increase training of facilitators; establish separate training institutes for ECCD facilitators.
- Improve centre monitoring and supervision.

- Enhance inclusiveness of centres.
- Increase parental awareness and motivation to use ECCD services.

Surveys

Respondents to the stakeholder questionnaires were asked to what extent they had worked with other sectors in the past 12 months. Responses to these questions could be used to gauge how efficiently different ECCD service providing sectors collaborate with each other in the provision of services. Respondents were also asked to rate the effectiveness of the cooperation (from 0 to 100). Average responses are given in Figure 11 below from the CMC secretary questionnaire and the Pre-Primary teacher questionnaire (n=22 for each questionnaire). Statistics on the effectiveness of cooperation are shown based on responses only for those who had worked with the relevant other sector (respondents who had not worked with the relevant sector were excluded from the effectiveness rating).

CMC secretaries were most likely to have worked with facilitators from their ECCD centre. Respondents stated that they had worked with facilitators in their centre to a high (23%) or moderate (50%) extent. Most had not worked with CMCs from other *dzongkhags* (68%) or specialist practitioners from within their *dzongkhag* (59%). Of those who had worked with each type of provider, the highest effectiveness rating were for facilitators within their centre (average of 77 out of 100 effectiveness), and the lowest rating was for working with the MoH (53 out of 100), followed by specialist practitioners (59 out of 100).

As shown in Figure 10, Pre-Primary teachers were also most likely to have worked with ECCD facilitators from within their *dzongkhag*, with 68% having worked over the past 12 months to a moderate extent, and a further 5% to a high extent. This cooperation was also rated most highly at 77 out of 100. A majority had not worked with specialist practitioners in their *dzongkhag* (73%) and primary school teachers from other *dzongkhags* (55%). Effectiveness of cooperation with the specialist practitioners and the MoH also had the lowest ratings.

Interviews

Unequal resourcing of crèches, being financed entirely by parents, appears to contribute to differences in crèche quality. Ratios of staff to children ranged from 1:3 to 1:9. Minimum qualifications and initial training are lower for crèche caregivers than for ECCD centre facilitators. Children attending crèches ranged in age from six months to five years, blurring the lines between childcare and preschool. Read together, these factors raise concerns about the school readiness of children transitioning directly from crèche to primary school.

While it is noted that ECCD facilitators have recently received civil service contracts, a high level of variability continues to characterise ECCD centres. Staff child ratios amongst interview respondents varied from 1:8 to 1:24, insufficient teaching and learning resources at four participating ECCD centres were reported and in one case, inadequate access to water was reported to hamper hygiene practices. Secretaries of CMCs reported the need to build more ECCD centres, to upgrade existing centres, to provide safe drinking water and toilet facilities and to provide children with lunch. In addition, secretaries of CMCs acknowledged awareness that centre facilitators were working more than their contracted hours and spoke of the need to increase facilitators' salaries and to upgrade their training and access to professional development opportunities. Indeed, there was a difference between centre-level staff and DEOs' reports of actual access to professional development opportunities.

DEOs reported that ECCD services are provided at no cost to families. *Dzongkhag* expenditure per child per annum was highly variable across *dzongkhags* (when known). Similarly, *dzongkhag*-level investment in ECCD facilitator PD was variable although seven DEOs reported funding for facilitator PD to be insufficient to meet *dzongkhag* needs.

Here, the focus is on the allocation of resources to support optimal child outcomes. Major budget items at centre level include materials and resources, infrastructure costs, travel allowances, and facilitators' professional development. DEOs all advised that parents do not pay for their child to attend ECCD centres.

DEOs reported that budget allocation decisions are informed by:

- The number of ECCD centres in a *dzongkhag*;
- ECCD centre requirements, enrolment numbers;
- The standing Resource Allocation Formulation (RAF) policy;
- Local government level decisions;
- Educational policy; and
- Government priorities and the National Strategic Plan.

Annual expenditure per child enroled in ECCD was highly variable across *dzongkhags* ranging from Nu.200 to Nu.1,000 in four *dzongkhags*. Four DEOs reported total annual expenditure on children (rather than providing a per-child figure) ranging from Nu.500,000 to Nu.1,200,000. Two DEOs were unable to provide an estimate. One DEO described not having a specific budget allocation for ECCD in that *dzongkhag*.

With regard to the delivery of parenting education programmes, challenges to effective programme delivery were reported to include variable parent attendance, uneducated

parents, language barriers, geographical distance and budget constraints. Funding appears to be variable: five DEOs reported having no specific budget item for parenting education programmes, relying on sporadic funding from private donors, one DEO reported that since centre facilitators conduct these programmes, funding is derived from training expenses. The RGoB and UNICEF were reported to co-fund parenting education programmes in two *dzongkhags* whereas one DEO reported that the programmes were jointly funded by the MoE and the ECCD Division.

Turning to the centre facilitators' professional development, *dzongkhag*-level investment in facilitator professional development varied, ranging from Nu.100,000 to Nu.2000,000 per annum. Seven of the nine DEOs indicated that the expenditure on professional development programmes was insufficient to meet the needs of their *dzongkhag*. One DEO reported that one-third of the ECCD facilitators in the *dzongkhag* had not undertaken initial training.

Sustainability – Recommendations made by DEOs to address operational quality and financial sustainability of ECCD services include the following:

- Increased funding for ECCD to support more professional training for facilitators and infrastructure improvements to centres;
- Improved facilitator child ratios, changing 1:15 to 1:10 or 1:5;
- Introduction of Information and Communication Technology (ICT);
- Increased public awareness about the importance of ECCD programmes;
- Establishment of additional mobile ECCDs in remote villages;
- Improved parenting education programmes; and
- Involvement of more stakeholders.

Turning to health care, most health workers reported health centres to be adequately resourced. DHOs reported that health care for children is provided free of charge, whilst two health workers reported that parents/caregivers are required to pay for health care services for their children.

Details of *dzongkhag*-level funding for child health care were not available, but seven DHOs reported funding to be insufficient to meet needs. An added obstacle is a shortage of trained health workers. Eight DHOs reported that all health workers receive initial training in their *dzongkhag* yet only four of the health workers interviewed met the minimum qualifications for their roles. Five DHOs reported that there was insufficient funding for health workers' PD.

Parent education programmes are perceived by DHOs to be effective but appear to

have no specific budget allocation and are funded by parent donations and/or health workers' travel budgets.

Health centres in Bhutan are fully funded by RGOB. Allocation of financial resources at *dzongkhag* level is determined in accordance with total population, child population, infrastructure, location of health centres, disease burden, the APA, and RGOB's priorities. Health care for children is provided free of charge. A per capita calculation of health expenditure per child was not available. However, seven out of the nine DHOs reported insufficient health centres to provide a service to all children aged from conception to eight years.

C4CD is well established and all DHOs reported that C4CD-trained health workers encourage parents to access C4CD services for their families. This occurs through health education, counselling both during- and post-delivery, and by raising awareness of C4CD during parental visits to ORC and to BHUs. However, DHOs reported several obstacles to health service uptake for children. These included geographical distance, cultural barriers, indifferent attitudes, parental illiteracy, busy schedules, monetary constraints, 'broken' families, parental physical disabilities and health centre staff's critical attitudes towards parents. Only one DHO reported that all parents were willing to take up health services, stating that services are important for their children and provided at no cost. Access to trained health workers is an obstacle; one DHO reported specifically needing a female health assistant.

While parent education was reported to be effective, the nine DHOs interviewed had no specific budget allocation for parent education programmes. Instead, these appear to be funded by parent donations and/or from the health workers' travel budgets. Indeed, six DHOs reported that travel expenses of field staff and construction of facilities accounted for most of the *dzongkhags'* annual expenditure on health care services. On the other hand, three DHOs reported that promotional activities and awareness programs accounted for most of the annual budget.

Staffing decisions were aligned with Human Resource (HR) guidelines, IMNCA, workload, population, infrastructure, standard of health facilities and staffing needs. Eight DHOs reported that all health workers received initial training in their *dzongkhag*. After initial training, professional development opportunities include occasional refresher training courses, workshops, job attachment, basic courses (on RH, ANC PNC), study tours and CME. One DHO reported conducting impact assessments to determine the type of courses to offer. However, while the budget allocation for health workers' professional development varied significantly, in five *dzongkhags*, annual expenditure on the professional development of health workers was reported to be insufficient.

Centre observations

The centre observation data was a measure of the quality of centres. This provides evidence for the evaluation of efficiency of the appropriateness and adequacy of resources allocated to support implementing ECCD programmes to achieve high quality and equity-focused results for children at the centre level.

The Operational Guidelines for ECCD centres issued by the MoE and UNICEF provided guidelines on ensuring quality of early childhood learning environment in terms of safety, health, hygiene, and space and materials for learning and play. While around one-fifth of the centres were able to maintain a safe environment, protecting children from hazardous conditions, a substantial portion of centres had some hazardous conditions nearby that posed risks to children. On WASH conditions and measures, clean toilets with ventilation and adequate drinking and washing water were available in around 60% of the centres. The most commonly observed hygiene measure was the provision of soap (nearly 80%) and having running water for washing hands (around 60%), but only less than one-third of the centres had clean materials for drying hands, guidelines for taking care of sick children, and first aid kits, even though these were listed in the guidelines.

All centres had classrooms (with half of them large enough for children's indoor activities), and nearly all had outdoor space for gross motor activities. Regarding classrooms facilities, most centres (82.14%) did not have any tables or chairs for children to use. With reference to the required sets of indoor and outdoor equipment and materials listed in the Operational Guidelines of ECCD centres, it was found that only a small number of centres had the required number of sets available for children's use. Some centres did not have certain types of equipment or resources at all, particularly science items or musical instruments and drums.

While the sample size does not allow for meaningful comparisons between different types of centres, differences in quality in terms of classroom facilities and materials, WASH facilities and measures, and the presence of hazardous conditions in covered spaces were found among community, mobile, private, and workplace-based centres, with private centres scoring higher than community centres on average. A wide range was observed in the scores among community centres, showing that the quality of centres varies across community centres.

Sustainability

Sustainability is evaluated in terms of whether ECCD services are capable of sustaining in the long term, but in terms of finances and in terms of operational stability. Sustainability is impacted by policies, funding sources and work models and the extent to which work models are scalable.

Financial sustainability

Variable funding by parents contributes to unequal crèche resourcing, which in turn impacts on opportunities for child learning and development. A need was reported for improved facilitator supervision, guidance and access to professional development opportunities, particularly since some children transition from crèche directly into primary school.

Monthly ECCD enrolment fees[9] were highly variable. In five centres, fees ('contributions') ranged from Nu.100 to Nu.500. One ECCD centre charged no fees, two centres charged parents Nu.300 per annum, and one centre charged Nu.650 per annum. Seven of the nine respondents expressed the belief that parents would be willing to pay more for ECCD services.

CMC questionnaire respondents gave information about the fees ('contributions') and expenditures at their centre (n = 22 respondents). The majority (59%) said that their centre was funded with 100% government funding. 41% said that some fees ('contributions') were paid by parents, but within this group there was wide variation in the proportion of total fees ('contributions') that were paid by parents, ranging from just 10% to 100% of total fees. Eighteen per cent said there was also some other form of funding aside from parents and the government.

When asked whether their budget was sufficient for the daily operation of their centre, 86% of CMC respondents said the budget was not sufficient, with 14% saying it was sufficient, and 0% saying it was more than sufficient (n=22).

An additional challenge named by secretaries of CMCs includes the application of guiding documents for centre-level policy decisions, which included ECCD guidelines, QMTEC guidelines, Better Early Learning and Development at Scale (BELDS), Child Development Screening Tools (CDST) and parent education guidelines. However, challenges encountered in translating MoE polices into practice include inadequate funding and inadequate facilities. In addition, five secretaries reported difficulty in comprehending and implementing policies and guidelines.

Health workers reported the need to employ more trained health workers for ECCD centres (this is interpreted by the researchers to mean health centres), as well as the need for increased opportunities for professional development of existing health workers. The need for improved coordination of C4CD and ECCD interventions by the ministries of health and education was also proposed.

DHOs made the following recommendations to improve ECCD services in Bhutan:

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[9] ECCD is fully funded by government. The nature of the fees reported here is unclear. Study limitations prevent the evaluation team from determining the nature of these fees.

Additional training of health workers.

- A dedicated budget for C4CD services.
- The establishment of additional private ECCD centres.
- Greater collaboration between the MoH and ECCD centres.
- Establishment of clear guidelines about ECCD service provision.
- Equipping all health centres with adequate playground facilities accessible to all children, including those with additional needs.
- Maintenance of uniform quality standards in public and private ECCD centres.
- Staffing all health centres with dedicated ECCD facilitators.
- Enabling existing ECCD facilitators to work in BHUs.

Survey findings

Relevance

The evaluation team considered survey evidence on whether the national and local objectives for ECCD are reflected in the implementation of programmes and in service provision. Centre facilitators, CMC secretaries, DEOs and DHOs responded to survey questions about their familiarity with ECCD-related policies within their district and for Bhutan more broadly, and the alignment of centre operation with these priorities.

A large proportion of surveyed centre facilitators, CMC secretaries, DEOs and DHOs indicated that they were familiar with the ECCD-related policies in Bhutan at both national and *dzongkhag* levels. This suggests that attempts to ensure ECCD service providers are aware of national and *dzongkhag* policies for ECCD service provision, have largely been successful, at least as reported by the service providers themselves. However, a substantial minority (around 10% or fewer) of service providers in each role indicated that they were not familiar with ECCD-related policies. This indicates that efforts to ensure that policy awareness extends to all staff may be an important objective in ensuring that national and local objectives for ECCD are reflected in the implementation of programmes and service provision. Two further caveats are important to note. The first is the sample size for the stakeholder survey was relatively small in most cases, so small variations in responses create sizeable differences in response percentages, therefore small differences should be interpreted with caution. The second is that social desirability bias - in which respondents' answers to questions may be related to the social desirability of those answers (Bryman, 2012) – may cause respondents to indicate that they have more

familiarity with ECCD-related policies than is in fact the case. If social desirability bias was indeed affecting responses, then the survey results may understate the number of service providers unfamiliar with national and local policy objectives.

Most DEOs and DHOs also agreed that the operation of ECCD centres – both within their *dzongkhag* and nationally- aligns closely with the *dzongkhag* or national priorities. However, one DEO disagreed that the operation of ECCD centres aligns with national priorities. These findings are encouraging, although the same potential caveats in terms of sample size (which was necessarily small given the small number of DEOs and DHOs) and social desirability bias apply once more.

Effectiveness

The survey data provided considerable evidence on the effectiveness or otherwise of ECCD services, and was used to evaluate whether policies and programmes were related to favourable changes in children's outcomes. For each child, an overall Early Childhood Development Index (ECDI) score was created based on the mean of all the parent-reported survey items measuring child development. These scales – created both for birth to two-year-olds and for three- to five-year-olds separately – had good scale reliability, with high Cronbach's alpha scores. For children aged 3- 5 years the items were based on UNICEF's ECDI questions, and for children aged birth to two years the items were extracted by the HKU team from the Bhutan Child Development Screening Tool. Substantial age gradients were also identified whereby older children had consistently higher average scores than younger children, suggesting that these scales were valid developmental scales showing progress in developmental scores as children age.

Children with parents with greater household wealth, and children with more highly educated mothers, had higher ECDI scores than other children. Children whose parent reported that they faced difficulties – for example with seeing, hearing, and self-care – had substantially lower scores than other children. These findings highlight the importance of ensuring ECCD services reach the disadvantaged children who may need them most, including those facing socioeconomic disadvantage and those facing learning and physical barriers to their development. Differences between children's average scores were also found between *dzongkhags*. Children residing in Tsirang had the lowest ECDI scores of birth to two-year-olds, and children residing in Trongsa had the lowest ECDI scores of three to five-year-olds.

Findings tentatively suggested that parent and child participation in C4CD may be related to improved development for birth to 2-year-olds. After controlling for socioeconomic covariates including household wealth and maternal education, and after accounting for geographic differences in the sample, parent-child pairs who had participated in C4CD

had significantly higher ECDI scores than those who had not. However, differences between participants and non-participants in C4CD did not increase across age, so it may be the case that the difference could be due to unobserved socioeconomic differences between children, or in differences in the availability of other local services.

Substantial differences were found between 3- 5-year-olds who attended ECCD centres and those who did not, and these differences were larger for older children compared to younger children. Regression analyses showed that, at the youngest ages within this range, there were no significant differences in ECDI scores between attenders and non-attenders, but for older children these differences increased gradually and were large and significant for the oldest children in this age range, even after controlling for covariates and adjusting for geographic differences. These findings suggest that ECCD services for 3- to 5- year olds in Bhutan may be effective at improving children's developmental outcomes. It is important to note that these survey data are not longitudinal, and it is difficult to make a causal inference about this result. It may be that there are differences between older and younger children that are related to their cohort rather than ECCD services, or that a third unobserved factor is causing the difference. However, it is striking that there was no significant difference in ECDI scores between attenders and non-attenders aged 36 months while, on average, a 50-month-old child attending ECCD had a roughly equivalent average ECDI score to a 72-month-old child who had not attended ECCD, even after controlling for covariates. At the very least this is a highly encouraging finding for those hoping to use ECCD services to improve children's outcomes; further research into the mechanisms that may underpin this pattern across age could provide additional evidence on whether ECCD services really are causing these differences.

Pre-Primary teacher questionnaires provided details on teachers' views on the school readiness of children who had attended ECCD compared to children who had not attended ECCD. This evidence was compatible with the parent survey data suggesting that ECCD services for 3 - 5-year olds improved outcomes for children. Pre-Primary teachers rated the competence at primary school entry of children who had attended ECCD as substantially greater than those who had not on a number of competencies. From a list of 18 competencies, teachers rated children who attended ECCD as 'very competent' in 31% of the competencies on average, compared to an average of just 5% of those who had not attended ECCD. Independence and self-confidence were commonly stated as most important competencies for school readiness. These survey responses did not account for differences in children's socio-demographic background between ECCD attenders and non-attenders but, combined with the regression analyses that did control for socio-demographic covariates, suggest that ECCD for 3- 5-year olds in Bhutan may plausibly be helping children's development and their preparation for primary school.

Surveys were examined for areas of improvement to enhance ECCD service effec-

tiveness. No significant differences were found in ECDI scores between those whose parents had attended parenting programmes and those who had not, which meant it was not possible to conclude that these programmes are currently effective in improving outcomes. A potential area of improvement for effectiveness could be to examine why these parents appear not to be leading to benefits for children. Reported take-up of antenatal and postnatal care was very high – an encouraging finding in itself – but this meant that analysis of its benefits (or otherwise) was not possible due to very low variation in the sample.

Analysis of exclusive breastfeeding rates reported by caregivers was related to children's ECDI scores, even after controlling for covariates. Children who received exclusive breastfeeding of up to at least eight months had significantly higher ECDI scores than children who received exclusive breastfeeding for fewer than eight months. Further, the benefits of exclusive breastfeeding may be associated with durations of up to 12 months.

Sixty-three per cent of parents reported exclusive breastfeeding until at least 12 months of age, compared to a global average of only 38% of infants, aged birth to six months, who are exclusively breastfed (World Health Organization, 2014). However, despite these high rates of breastfeeding significant differences were still found in ECDI scores until at least eight months' duration. It may be that these differences are related to other unobserved factors, such as maternal health issues that may be causing reduced exclusive breastfeeding rates alongside other negative effects. Nevertheless, making even further progress at increasing breastfeeding rates in Bhutan could be beneficial for ensuring positive outcomes for all children.

Efficiency

Survey data were examined to investigate evidence of the appropriate and adequate allocation of resources to support the implementation of ECCD programmes. Respondents to the stakeholder questionnaires were asked to what extent they had worked with other sectors in the past 12 months. Responses to these questions could be used to gauge how efficiently different ECCD service providing sectors collaborate with each other in the provision of services. Respondents were also asked to rate the effectiveness of the cooperation (from 0- 100).

Both CMC secretaries and Pre-Primary teachers indicated that, of all the listed service providers, they were most likely to have worked with ECCD centre facilitators – in the case of CMC secretaries, these were the facilitators from within their centre, and in the case of Pre-Primary teachers, these were the facilitators from within their *dzongkhag*. Of all the service providers, centre facilitators were also rated most highly for effectiveness. This suggests that centre facilitators are cooperating well with their centre CMC secretaries, and with local Pre-Primary teachers. However, within the past 12 months

most CMC secretaries had not worked with CMC secretaries in other *dzongkhags,* and most Pre-Primary teachers had not worked with primary school teachers from other *dzongkhags*, suggesting cooperation across dzongkhags may be more limited.

Sustainability

Survey data were also examined to investigate service providers' views on the long run sustainability of their services. Questions on the financial sustainability of ECCD centres was analysed from the CMC secretary questionnaire. Responses indicated that government funding was a very important part of centre budgets, with the majority of centres being funded using 100% government finance. Fees ('contributions') paid by parents were important for a large minority of centres, but with a wide variation across centres in the proportion of total funding provided by parents.

It was striking that a very large majority (86%) of CMC secretaries indicated that their budget was not sufficient to cover the daily operation of their centre, with no secretaries reporting that it was more than sufficient. This suggests that most secretaries are facing difficulties in meeting daily costs and may indicate concerns about the long term financial sustainability of ECCD centres without increases in funding.

When expenditures were broken down by category of expense, salaries made up a relatively small proportion of expenditures compared to international standards. Internationally, teachers' salaries tend to be the main component of costs for educational institutions (OECD, 2011), but CMC secretaries reported that salaries made up an average of just 13% of expenditures. By contrast, facilitator professional development programmes made up an average of 18% of costs, with other daily operating costs such as rent, furniture, and materials and equipment also amounting to significant proportions of total expenditure. One interpretation of these findings could be that salaries are relatively low, and that centres are bearing much of the responsibility for providing training and professional development for facilitators.

Appendix I: Terms of Reference

Evaluation Reference Group

Background

The Ministry of Education and UNICEF Bhutan Country Office calls for the establishment of a reference group for the evaluation of the Early Childhood Care and Development (ECCD) Programme. This is one among several recommended quality assurance measures to improve the evaluation function at the country level.

Purpose

This evaluation will have a reference group that is constituted with the requirements of the ECCD evaluation. The primary purpose of the reference group is to provide quality assurance. The reference group accompanies the evaluation from its inception through to the review of a mature draft of the report. It acts as a 'critical friend', pointing to technical and procedural issues that could be improved, and ensuring that evaluation norms, standards and ethical principles are adhered to. By its composition, the reference group contributes different stakeholder perspectives. Overall, the reference group serves to strengthen the independence and credibility of the evaluation.

Composition

The reference group could comprise the following members:

Co-Chairs: Chief of ECCD & SEN Division (Ministry of Education), and PME Specialist of UNICEF Bhutan.

Members:

- Education Focal Person, GNHC
- Focal person, Research and Evaluation Division, GNHC
- ECCD Deputy Chief Programme Officer, Ministry of Education
- Integrated Management of Neonatal and Childhood Illnesses (IMNCI) Chief/Focal Programme Officer, Ministry of Health
- Centre of Early Childhood Studies Project Manager, Paro College of Education
- Child Protection Unit, focal person, NCWC
- Evaluation Advisor/Officer, UNICEF ROSA
- Health Specialist, UNICEF Bhutan
- Education Specialist, UNICEF Bhutan
- PME Officer, UNICEF Bhutan

- Education Manager/MEAL Officer, Save the Children Bhutan
- Education Programme Officer, Tarayana Foundation

Ideally, the reference group should include a balance of stakeholder interests, men and women, and – where appropriate – regional, ethnic, language or other groups.

In some cases, to ensure adequate expertise on the evaluation reference group, members may receive travel and DSA, based on actuals. This will be done to facilitate the participation of some members in reference group meetings.

Tasks

Taking into account (i) any procedures and guidelines of the country office, (ii) UNICEF quality standards for evaluations, and (iii) UNEG norms, standards and ethical guidelines, the reference group will:

- Review and comment on the terms of reference of the evaluation.
- Review and comment on the inception report of the evaluation, including data collection tools, oversight on data collection analysis and report writing.
- Comment on a briefing on preliminary findings and conclusions of the evaluation team.
- Review and comment on a first complete draft of the evaluation report.
- Endorsement of the final report and dissemination plan for the report.

Outputs

- Oral comments on each review milestone, if meetings are conducted.
- Written comments on each review milestone, as agreed with the evaluation manager.

Management

The evaluation manager, in consultation with the EMT (in Bhutan, this will be Country Management Team-CMT), will invite different stakeholders to participate in the reference group.

The evaluation manager (PME UNICEF Bhutan and ECCD Officer from MoE) will ensure that the reference group is consulted during key review milestones and is given sufficient time to conduct a meaningful review. To the extent possible, face-to-face meetings will be conducted for each milestone, including the team leader and other team members of the evaluation. If possible, a member of the country office's EMT should attend reference group meetings.

The evaluation manager should circulate meeting notes and written comments by members to all reference group members, the evaluation team, and the EMT.

Comments on all review milestones (oral and written) should be compiled. An 'audit trail' should be prepared for comments on the draft report, with the evaluation team responding to every comment (accepted and incorporated how; rejected and why).

The evaluation manager should bring issues receiving much attention by the reference group, or any controversy, to the attention of the EMT. The EMT will, in all cases, take a binding decision.