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Early Childhood Development in Qatar: Status and opportunities for the future

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Foreword

We all intuitively acknowledge the importance of a 'good start' in life. Yet the positive impact of quality care and stimulation for young children is nothing short of dramatic for an individual's future success, and is hard to overstate. We know that mothers with more education seek prenatal care, and that education leads to smaller, healthier, more prosperous families. The knock-on effect is clear: supporting early childhood development (ECD) and education is the single most effective investment a government can make for the sustained prosperity and security of the whole society. Indeed, we know that investment in the early childhood years has greater long-term impacts compared with those made in later years' education.

As the United Nations Sustainable Development Goals call for an end to extreme poverty and inequity by 2030, ECD plays a major role in generating economic and equity benefits. To this end, early childhood development and education research has been a high priority for WISE since the launch of our report series in 2015. It included a valuable framework report, "Quality in Early Childhood Education: an International Review and Guide for Policy Makers" from Cambridge University. Chief author David Whitebread returned to Doha to lead an intensive workshop for an enthusiastic group of early childhood teachers from around Qatar. Locally based authors followed with a policy brief on early childhood education in Qatar, featuring guidance for effective practice and development.

This WISE Report returns to the topic in a close collaboration with the Ministry of Education and Higher Education and the World Bank. For young children, learning and stimulation is closely linked with many sectors: nutrition, quality health and reproductive care, water quality, support for the most vulnerable, among others. Early intervention, family support, education, health and social services are all part of the tapestry of policy impacting outcomes for children, and the whole community. In a wealthy country such as Qatar, the challenge comes in developing coherent, integrated systems among these diverse institutional stakeholders. Building on rigorous performance analysis of various key services and sectors, a closely observed institutional portrait emerges from this report.

Thanks to the strong interest and commitment of Qatar's leaders to childhood development and education, Qatar is making progress. With greater awareness of the importance of the early years, families and community leaders, in partnership with dedicated educators and policymakers, are building institutions that together reflect and support the exciting potential of the youngest they serve. The future is built on their latent dreams and aspirations. Nothing could be more crucial.

Stavros N. Yiannouka
CEO
WISE

Executive Summary

The years between conception until age five mark the most important period for a child's development. The foundations for a lifetime of learning are laid long before entering primary school. The building blocks of the brain and nervous system are formed and critical skills and capacities are developed (Nelson 2000). Physical development occurs rapidly as children develop both gross and fine motor skills. Executive functions that enable individuals to plan, focus attention, remember instructions, and juggle multiple tasks successfully are also developed. Even early literacy and numeracy skills begin to emerge.

Together, the healthy development in each of these areas lays a strong foundation for children's holistic development later in life (Bierman and others 2008; McCain and Mustard 1999). In turn, inadequate development in one or more of these domains can impede brain development, with subsequent negative impacts throughout the individual's lifespan. For example, early gaps in executive functioning, and language skills jeopardize a child's capacity and motivation to learn upon entering primary school. Low levels of school readiness, in turn, can lead to poor academic performance (World Bank 2015a).

Despite this overwhelming evidence, child development outcomes in Qatar are below what is expected given its level of economic development. Gaps in self-regulation skills persist, with a third of children ages three and four being unable to attend to, and focus on, simple tasks without being distracted easily. Early literacy and numeracy skills are not being developed by many young children in the country, with 60 percent of children in this age group unable to read four popular, simple words, and 30 percent unable to name and recognize symbols for all numerals one to ten.

Addressing these early gaps is key for shaping not only the life course of Qatar's young children, but also the trajectory of the country's development. Improved early childhood development (ECD) in the country has the potential to enhance children's academic performance in primary and secondary school. Indeed, this study finds that students who attended preprimary education perform significantly better than their peers at age 15 in all subjects of the Program for International Student Assessment (PISA) (mathematics, reading, and science), after accounting for school, teacher, and family characteristics. Improved early development can also lead to better health outcomes and higher earnings later in life (Karoly 2016; Phillips and others 2016; Gertler and others 2014; Dickens and others 2006). Moreover, benefits are likely to extend beyond the individual to the economy and society, potentially improving economic outcomes and even reducing crime rates (Sala-i-Martin, Doppelhofer, and Miller 2004; Walker 2011).

Realizing this potential requires Qatar to invest in three key areas: strengthening the policy environment for ECD in the country, improving the coverage and scope of programs, and establishing a comprehensive quality assurance system for continuous quality improvement of ECD services.

A stronger policy environment is needed to design and implement effective ECD interventions in Qatar. Short-term priorities should include the establishment of a multisectoral body that coordinates the development of a comprehensive ECD strategy for Qatar which clearly articulates the government's goals and objectives for ECD, and that oversees implementation of the strategy. With these two initial steps taken, important policy actions should follow, including the development of a comprehensive child protection policy, and the expansion of breastfeeding and parental leave policies.

ECD programs should be broad in their scope and implemented widely, reaching all children in Qatar. The coverage of nutrition programs and preprimary education should be significantly increased. Efforts to increase coverage should include an expanded supply of programs, but also key demand-side interventions. Public demand for ECD programs will need to be cultivated if coverage is to grow. In addition, efforts should consider and address inequalities in ECD coverage across socioeconomic lines. The scope of ECD programs provided can also be expanded in the medium-term to include parenting and caregiver programs.

Establishing a strong quality assurance system in Qatar is essential to guarantee that ECD programs yield the expected results. While Qatar has already developed most of the elements of an ECD quality assurance system, the country should fully articulate and align these various elements into a coherent system. Qatar should harmonize quality standards for all public and private teachers and providers, and develop a coherent curriculum covering ages zero to six. A parallel effort should be undertaken to implement monitoring and incentive mechanisms to ensure compliance with established quality standards. To establish a baseline from which to monitor progress, Qatar could develop a set of key performance indicators supported by a robust data system that measures child development outcomes and links them to the quality of service delivery. These data will be invaluable as the country moves forward in strengthening its ECD system.

Abbreviations

ECCE: early childhood care and education (sometimes used interchangeably with preprimary education or preschool)

ECD: early childhood development

ECE: early childhood education (sometimes used interchangeably with preprimary education or preschool)

ECERS: Early Childhood Environment Rating Scale

ETSS2: Education and Training Sector Strategy II for 2017-2022 (following up on ETSS 2011–2016)

GCC: Gulf Cooperation Council

GOQ: Government of Qatar

ISCED: International Standard Classification of Education

KG: Kindergarten

MADLSA: Ministry of Administrative Development, Labor and Social Affairs

MICS: Multiple Indicator Cluster Survey

MOEHE: Ministry of Education and Higher Education

MOPH: Ministry of Public Health

PISA: Program for International Student Assessment

SABER-ECD: Systems Approach for Better Education Results–Early Childhood Development

SEC: Supreme Education Council

SD: standard deviation

UNICEF: United Nations Children's Fund

WDI: World Development Indicators

WHO: World Health Organization

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Introduction

What is ECD?

Early childhood development (ECD) is a multidimensional process that takes place from conception until age five. These years mark the most important period for an individual's development. In this period, the building blocks of the brain and nervous system are formed, and critical skills and capacities begin to develop across a number of interrelated domains (Nelson 2000). These domains include the physical development of the child, her gross and fine motor skills, executive function and self-regulation skills, early socioemotional development, and emerging literacy and numeracy skills (De Laat 2015).

Together, the healthy development in each of these domains lays a strong foundation for children's holistic development later in life (Bierman and others 2008; McCain and Mustard 1999). In turn, inadequate development in one or more of these domains can impede brain development, with subsequent negative impacts throughout the individual's lifespan. For example, from an education perspective, early gaps in executive functioning, linguistic, and socioemotional skills jeopardize a child's capacity and motivation to learn upon entering primary school. Low levels of school readiness, in turn, can lead to poor academic performance (World Bank 2015a).

Why is investing in ECD so important?

Investing in young children's development is one of the smartest investments a country can make. Investments in skill formation during early childhood have higher rates of return than those made at any later stage in life (Heckman 2008) (figure 1). Moreover, benefits of ECD programs far outweigh their costs. For example, evidence from both developed and developing countries suggests that an additional dollar invested in high quality preschool programs can yield a return of anywhere between $6 (US) and $17 (Engle and others 2011; World Bank 2015a). These benefits range from lower repetition rates and fewer dropouts to better health outcomes and higher earnings into adulthood (Karoly 2016; Phillips and others 2016; Gertler and others 2014; Dickens and others 2006). In fact, benefits of ECD investments extend beyond the individual to the economy and society. Studies evidence linkages between investments in ECD and stronger economic growth (Sala-i-Martin, Doppelhofer, and Miller 2004) as well as lower crime rates (Walker 2011).

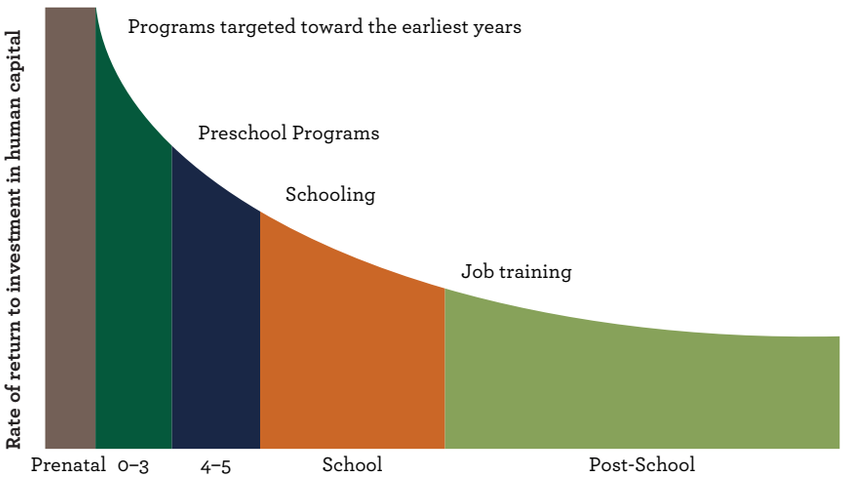

Figure 1. Returns to a Unit Dollar Investment in Skill Formation at Different Ages. Source: Heckman 2008.

Motivation for this Report

Despite this ample international evidence, the state of ECD in Qatar has thus far been understudied. Is Qatar investing enough resources in the early development of its children? Are these investments adequate in terms of quality and scope? Are they yielding the expected benefits in terms of child development and later life outcomes? A better understanding of these critical questions can provide a strong evidence base for shaping not only the life course of Qatar's young children, but also the trajectory of the country's development.

As a tripartite collaboration between the World Innovation Summit for Education (WISE) at Qatar Foundation, the Ministry of Education and Higher Education of the State of Qatar and the World Bank, this study begins to fill this gap by providing an overview of the state of ECD in Qatar and setting forward recommendations to strengthen ECD in the country.[1] The report first analyzes ECD outcomes in Qatar, examining how Qatar fares in five ECD domains compared to other countries. Section two builds the evidence base in the Qatari context by testing whether specific ECD programs are associated with improved child outcomes in the country. Section three takes a systemic view, analyzing the policies that govern ECD in Qatar and offers recommendations for their enhancement. Finally, section four concludes with a summary of key policy recommendations and some considerations for their implementation.

1 Primary data collection was not conducted for this report. Rather, this work relies on existing administrative data on child outcomes, program coverage, and policies shared by the GOQ, as well as the PISA 2015 data.

Chapter 1

Early Childhood Development Outcomes in Qatar

As described in the introductory section, during the early childhood period critical skills and capacities begin to develop across a number of interrelated domains (Nelson 2000). These domains include (1) physical development, (2) motor skills, (3) executive function and self-regulation skills, (4) early socioemotional development, and (5) early literacy and numeracy skills (De Laat 2015).

Qatar fares well on these early childhood developmental domains, though below expectation given its high level of economic development. The latest available data from the Multiple Indicator Cluster Survey (MICS) suggests that Qatar's three and four-year-olds perform well in early motor and executive functioning skills.[2] Yet, performance in other developmental domains is below expectation, given Qatar's high level of economic development. There are important challenges in the physical development of children, with more than a quarter of children under five being overweight or obese. Gaps in self-regulation skills also persist, with a third of children being unable to attend to, and focus on, simple tasks without being distracted easily. Finally, early literacy and numeracy skills are not being developed by many young children in Qatar. Though two-thirds of children ages three and four perform particularly well with letter recognition, many are not able to read simple, popular words. Moreover, thirty percent of children in this age group cannot name and recognize symbols for all numerals from one to ten.

The paragraphs below examine Qatar's performance in each of these early developmental domains. Two important caveats should be made. First, the only data source on child development outcomes available for this study was the MICS. MICS outcomes are reported by the child's mother or primary caretaker. As such, they are likely to be subject to social desirability bias—a tendency of survey respondents to answer questions in a manner that will be viewed favorably by others — introducing some bias in the outcomes. Second, international comparisons made using MICS are constrained by the sample of countries where this survey has been administered—middle and low-income countries. International comparator countries in this section are restricted to middle-income countries, and as such, provide a low benchmark for Qatar.

Physical Development

Globally, children's early physical development is assessed through traditional anthropometric measures of growth and nutrition (De Laat 2015).[3] Data is available for high weight for height in Qatar. Twenty-nine percent of children under five in the country are overweight or obese (Chanpong 2008). This is approximately ten percentage points above the OECD average, where nearly one in six children are overweight or obese (OECD 2017). As discussed in section three of the report, this is an area that requires rapid policy action.

2 The MICS is a household survey administered internationally by the United Nations Fund for Children (UNICEF). In partnership with the Ministry of Development Planning and Statistics, the survey was administered in 2012 to a representative sample of households in Qatar. This section uses MICS data collected through a questionnaire administered to mothers or caretakers of all children under five years of age living in the household. Data are then restricted to those children ages 3 and 4.

3 Anthropometric measures usually include stunting, short height for age; wasting, low weight for height; and overweight and obesity, high weight for height.

The mortality rate for children under five also provides an informative proxy for the physical development domain of children in the country. The under-five mortality rate in Qatar is fairly low, at eight children per 1,000. However, this rate remains higher in Qatar than in other countries with high levels of economic development, including OECD countries (figure 2).

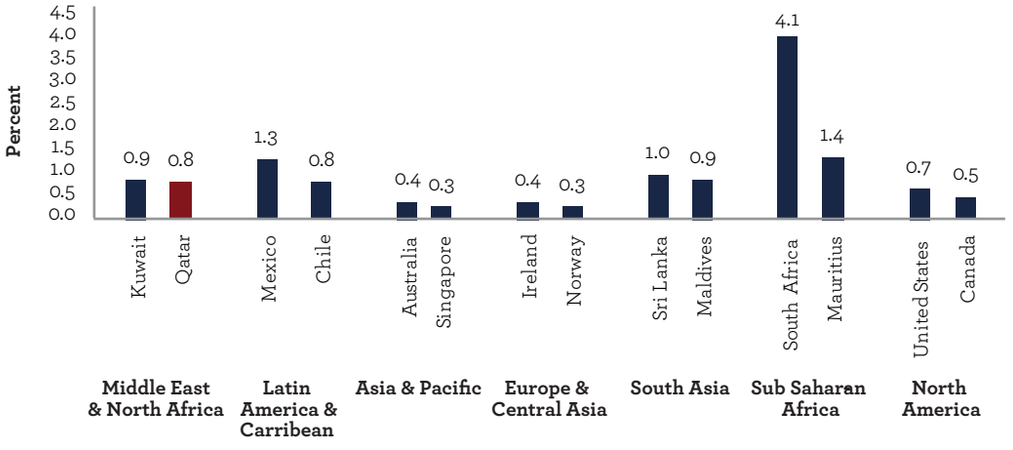

Figure 2. Mortality Rate Under-5, Select Countries from Each Region
Source: World Bank, World Development Indicators (WDI) database (data is for 2014).

Motor Skills

Most children ages three and four in Qatar possess early fine motor skills. Between ages two and five, children's fine motor skills develop moderately, allowing them to use their index finger and thumb to grasp and pick up objects. Children's sensory perception also develops during this interval as a result of improved motor skills. Therefore, this early skill plays a key role in the way children navigate their environment and coordinate their movements (US Department of Health and Human Services 2014). Evidence from MICS suggests that children in Qatar possess early fine motor skills, as indicated by the 96 percent of children ages three-four who are able to pick up a small object from the ground with two fingers (94 percent of three-year-olds and 97 percent of four-year-olds). Boys and girls do not differ on this skill. There is little variance on early fine motor skills between high and middle-income countries for which data was available (figure 3). Central and Eastern European countries show a slightly better performance than Qatar, and so do Uruguay and Thailand. Information on gross motor skills was not available for this study.

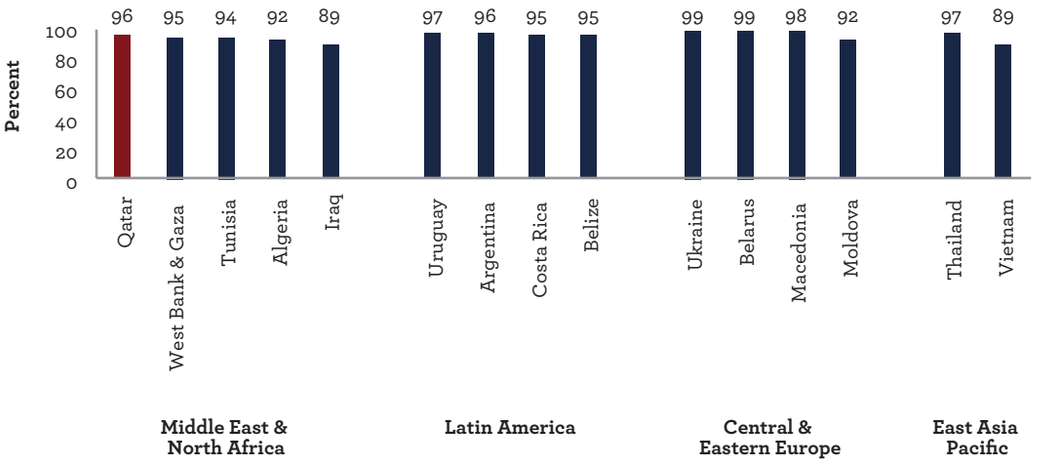

Figure 3. Development of Early Fine Motor Skills, Select Countries Source: Multiple Indicator Cluster Survey

Percentage of children ages three-four that can pick up a small object from the ground with two fingers.

Note: Latest year available was used: Qatar 2012, Oman 2014, Tunisia 2011, Algeria 2012-2013, Iraq 2011, Uruguay 2012-2013, Argentina 2011-2012, Costa Rica 2011, Belize 2011, Ukraine 2012, Belarus 2012, Macedonia 2011, Moldova 2012, Thailand 2012, Vietnam 2011.

Executive Function and Self-Regulation Skills

Most young children in Qatar have developed early executive function skills, but gaps exist in self-regulation skills. An important early ability required for children's learning process is to follow simple directions from adults. In fact, teachers in the early school years are often concerned about children's low levels of compliance with instructions (Stephenson and Hanley 2010). In Qatar, 91 percent of children ages three-four follow simple directions on how to perform a task correctly, with no notable differences between girls and boys (MICS 2012). Yet, only 63 percent of this age group does not get distracted easily when performing a simple task, as reported by their caretakers. A slightly higher percentage of boys are reported as not getting distracted (65 percent) compared to girls (61 percent) (MICS 2012). Overall, this percentage is low given Qatar's level of economic development. In fact, Qatar's performance in this area is below middle-income countries such as Tunisia, Thailand and Vietnam (figure 4). Early attention problems and the inability to focus on tasks is linked with later attention deficit disorders and associated with academic challenges, especially reading difficulties, warranting policy attention in this area (Rabiner and others 2000).

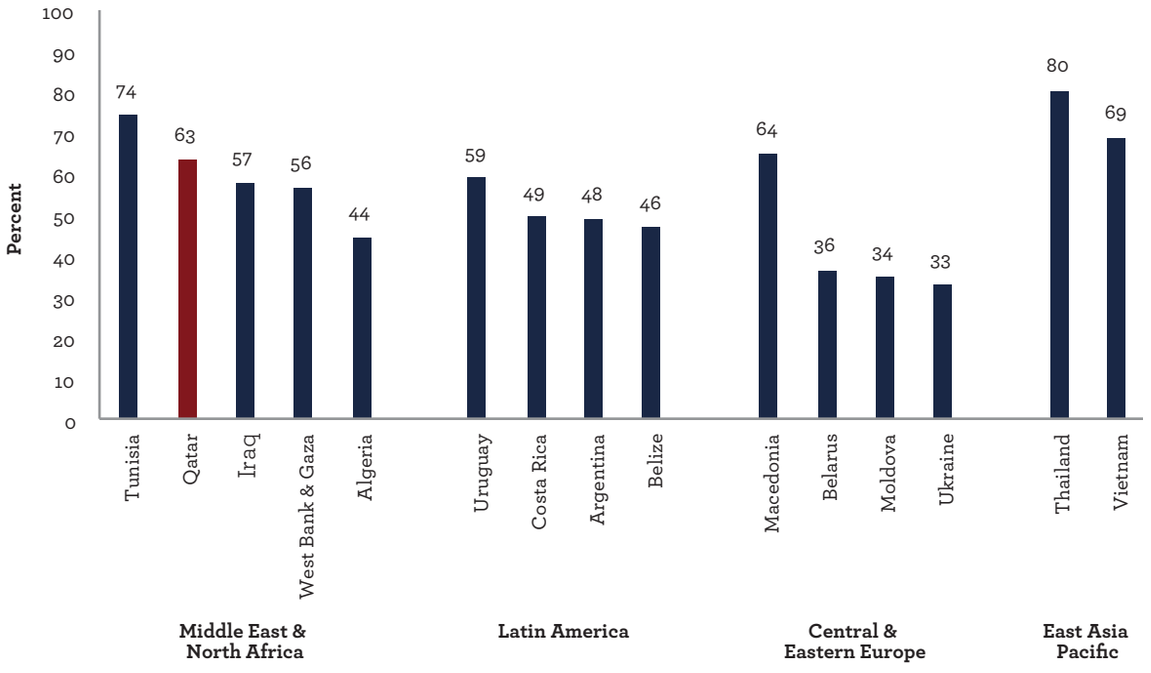

Figure 4. Development of Self-Regulation Skills, Select Countries Source: Multiple Indicators Cluster Survey

Percentage of children ages three-four that do not get distracted easily when conducting a task

Note: Latest year available was used: Qatar 2012, Tunisia 2011, Algeria 2012-2013, Iraq 2011, West Bank and Gaza 2010, Uruguay 2012-2013, Belize 2011, Argentina 2011-2012, Costa Rica 2011, Belarus 2012, Ukraine 2012, Macedonia 2011, Moldova 2012, Thailand 2012, Vietnam 2011.

Three-quarters of children ages three and four in Qatar are able to practice independence when performing a task. Although following directions without getting distracted easily is a stepping-stone for children's ability to learn, they also need to be able to do tasks independently. Independent learning is an important factor in young children's cognitive development. In fact, even in later years when children enter school, one of most effective methods to promote student learning is the student-centered method, in which students' autonomy and independence are encouraged (Jones 2007). Seventy-seven percent of children ages three and four in Qatar can complete tasks independently, with no difference between boys and girls, as reported by their caretakers (MICS 2012).

Early Socioemotional Development

The majority of young children in Qatar are able to regulate their emotions in a positive way and successfully interact with others. Most children engage in different forms of physical aggression during infancy, but later learn to regulate their anger and refrain from physical aggression toward others. Those who fail to regulate physical aggression before they enter school are at high risk of violent behavior, as well as depression and other psychological problems, at adolescence and adulthood (Tremblay and others 2004). In Qatar, the majority of children ages three and four are able to interact in a healthy way with others. Ninety-six percent of children in this age group are reported to be able to get along with other children, with no differences between boys and girls (MICS 2012). Yet, only three quarters of children in this age group are able to refrain from kicking, biting, and/or hitting other children or adults, as reported by their caretakers. A slightly higher percentage of girls are reported to refrain from physical aggression (76 percent) compared to boys (72 percent) (MICS 2012). This places Qatar slightly below most countries in Latin America and Central and Eastern Europe for which data is available (figure 5).

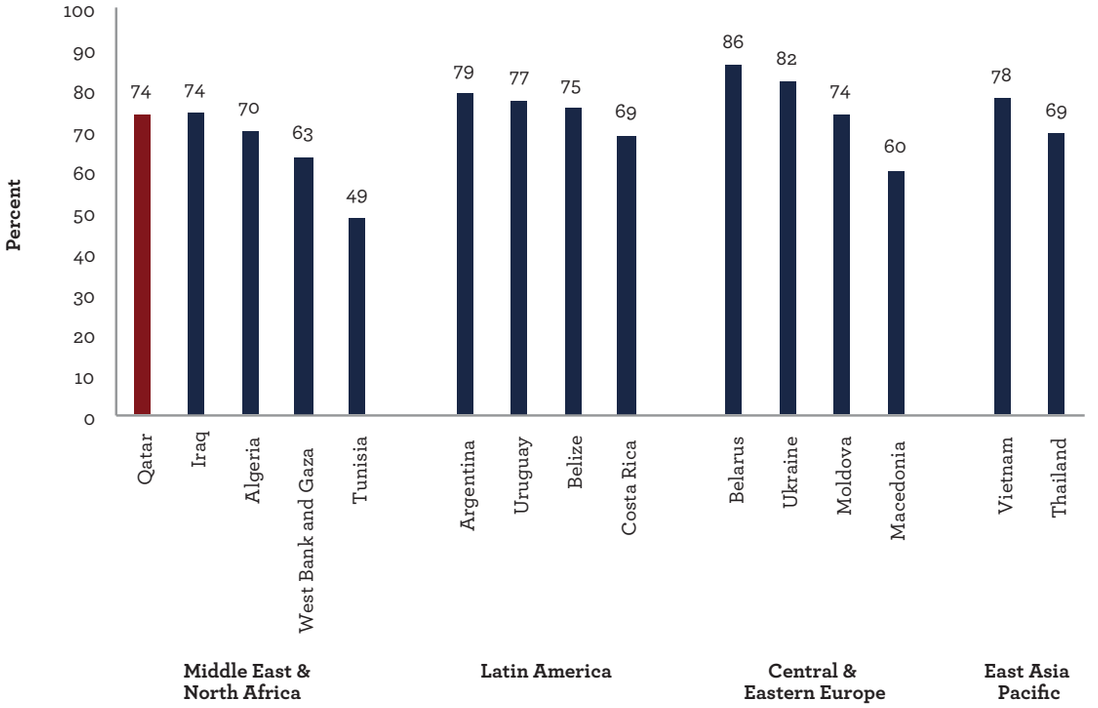

Figure 5. Development of Early Socioemotional Skills, Select Countries Source: Multiple Indicators Cluster Survey

Percentage of children ages three-four that do not kick, bite, or hit other children or adults

Note: Latest year available was used: Qatar 2012, Tunisia 2011, Algeria 2012-2013, Iraq 2011, West Bank and Gaza 2010, Uruguay 2012-2013, Belize 2011, Argentina 2011-2012, Costa Rica 2011, Belarus 2012, Ukraine 2012, Macedonia 2011, Moldova 2012, Thailand 2012, Vietnam 2011.

Early Literacy and Numeracy Skills

Two-thirds of children ages three and four in Qatar perform well with letter recognition. The ability to recognize and name letters in the years before children enter primary school is a significant predictor of later reading ability and literacy acquisition, which are both important correlates of academic success throughout the primary years of schooling (Bellamy 2001). Therefore, children's early ability to recognize and name letters is important in assessing their developmental trajectory. Researchers in some developing countries suggest that children should be able to recognize 18 uppercase and 15 lowercase letter names during preschool to ensure successful performance with reading ability in the later school years (Piasta, Petscher, and Justice 2015). MICS data allows assessing three and four-year-olds with a lower benchmark—naming at least ten letters of the alphabet. Parents in Qatar report that two-thirds of children ages three and four (68 percent) can name at least ten letters of the alphabet. This includes 55 percent of three-year-olds, and 82 percent of four-year-olds. There are no differences between boys and girls in their ability to recognize at least ten letters (MICS 2012).

A smaller percentage of children in this age group can read simple, popular words in the country. Although the recommended age for children to start reading is five, it is expected that children attempt to read and write, and that they are able to recognize common signs and labels by three or four years of age (US Department of Education 2005). Yet in Qatar, early literacy skills, such as being able to read at least four simple, popular words is observed in less than half of children ages three and four (41 percent). Twenty-nine percent of the three-year-olds and 54 percent of the four-year-olds are reported to be able to read at least four popular, simple words. Boys and girls at this early age present no differences in their reading ability (MICS 2012).

More than half of children ages three and four can name and recognize symbols for all numbers between one and ten. Children's mathematical performance in school is strongly correlated with their early number knowledge. Classical accounts of children's cognitive development suggest that by the age of three, children develop the ability to think about things symbolically (Gould and Howson 2011). Recognizing symbols for numbers should then develop rapidly from three to five years of age. Sixty-nine percent of children ages three and four in Qatar can name and recognize the symbols for all numbers between one and ten (58 percent of three-year-olds and 80 percent of the four-year-olds). Boys and girls perform similarly (MICS 2012).

Compared to other countries, a considerably higher percentage of children in Qatar are developmentally on track with respect to their early literacy and numeracy skills.[4] Children in Qatar seem to be developmentally on track in this domain in higher percentages than countries for which MICS data is available in Latin America, and Central and Eastern Europe, and on par with children in Thailand (figure 6). Yet, a third of children in Qatar are not developmentally on track in early literacy and numeracy skills, and this percentage is likely to be higher than high-income countries for which MICS data is not available.

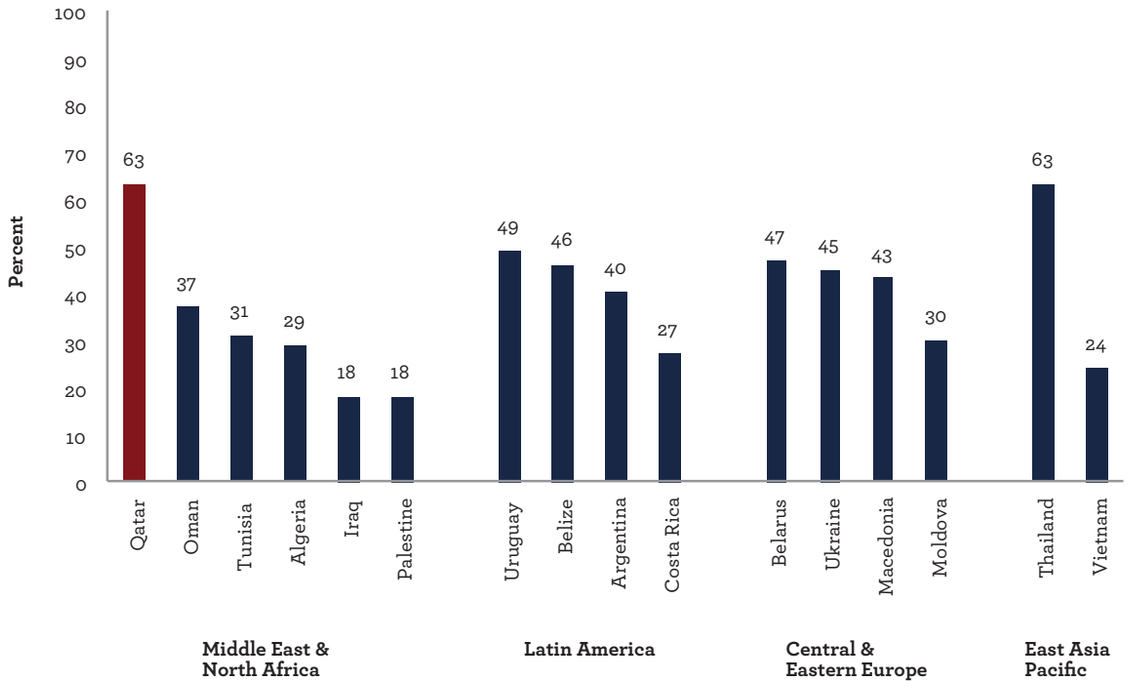

Figure 6. Children Developmentally on Track in Early Literacy and Numeracy, Select Countries Source: Multiple Indicators Cluster Survey

Note: Latest year available was used: Oman 2014, Tunisia 2011, Algeria 2012-2013, Iraq 2011, Palestine 2010, Uruguay 2012-2013, Belize 2011, Argentina 2011-2012, Costa Rica 2011, Belarus 2012, Ukraine 2012, Macedonia 2011, Moldova 2012, Thailand 2012, Vietnam 2011.

4 "Children developmentally on track in literacy and numeracy skills" is a construct used in the MICS survey that refers to those children who can do at least 2 of the following activities: (1) naming at least 10 letters of the alphabet, (2) reading at least four simple, popular words, (3) naming and recognizing the symbol of all numbers from 1 to 10.

Chapter 2

What Matters for ECD Outcomes: Evidence from Qatar

With the analysis of early development outcomes as a backdrop, this section turns to specific interventions that can contribute to improve these outcomes in Qatar. Although determinants of early development outcomes range from adequate healthcare to proper nutrition, this section specifically focuses on preprimary education and family-based interventions for the early stimulation and education of the child. The term preprimary education is used to denote institutionalized programs (school-based, center-based or community-based) targeted at children aged three years until primary school age.[5] In turn, family-based interventions are defined as purely family-based interactions that may or may not be purposeful, and that may lead to informal learning by children from their parents and/or other relatives.

Preprimary education and family-based interventions are key drivers of children's development both in their early years, and later in their childhood. Throughout their early years, children need nurturing environments that provide a high degree of cognitive stimulation and emotional care (UNESCO 2014). Such environments can be provided through institutionalized programs of high quality, such as attendance to kindergarten, as well as through early stimulating interactions at home. These experiences have been found to contribute to children's early numeracy and literacy skills, socioemotional development, and executive functions, which in turn result in stronger academic performance in school, better employment, and higher earnings (Gertler and others 2014; Karoly 2016; Phillips et al. 2016; Dickens and others 2006).

While the impact of these interventions is well established in the global literature, evidence from the Qatari context is largely lacking. This section provides novel empirical evidence on the association of preprimary education and family-based interventions with the early development of children in Qatar. It also draws on results from the Program for International Student Assessment (PISA) to test whether the associated benefits of preprimary education are observed later in a student's life. The data, empirical strategy, and results from the analyses are described below.

Evidence in the early years

The empirical analysis relies on data collected under the Multiple Indicator Cluster Survey (MICS). This survey was administered in 2012 to a representative sample of households in Qatar, stratifying by Qatari and non-Qatari families to ensure statistical representation of both groups (though results are not available separately for these groups). Specifically, the analysis uses data collected through a questionnaire administered to mothers or caretakers of all children under five years of age living in the household. Data are then restricted to those children eligible for preprimary education as defined by the International Standard Classification of Education (ISCED) level 0 (ages three and four).[6] This results in a study sample of 682 children. Annex table A1 presents descriptive statistics for this sample.

5 The definition of preprimary education used in this report is consistent with the International Standard Classification of Education (ISCED) for level 0.

6 Although the eligible age for preprimary education includes age five, data on this age group is not available from MICS.

Children's early development outcomes are measured in four domains: (1) motor skills, (2) executive functions and self-regulation skills, (3) early socioemotional development, and (4) early literacy and numeracy. Given data limitations, the fifth domain — physical development — was not included in the analysis. Table 1 describes how each of these domains is constructed. A composite index is also constructed to capture the child's holistic development by adding scores of all four domains.

Early Development Domain	Description of the Domain	How it is Constructed	Scale
Motor Skills	Child's ability to move small muscles of the hand to perform precise movements	Proxied through a binary measure of whether the child can pick up a small object (for example, a rock or stick) from the ground with two fingers, as reported by the child's mother	0–1
Executive Functions and Self-Regulation Skills	Child's ability to focus attention, prioritize tasks, achieve goals, and control impulses	Composite score constructed by adding the number of activities that the mother reported the child can successfully perform, from the following: • Correctly follow simple instructions on how to do something • Not get distracted easily • Perform a task independently	0–3
Early Socioemotional Development	Child's expression and management of emotions and the ability to establish positive relationships with others	Composite score constructed by adding the number of activities that the mother reported the child can successfully perform, from the following: • Get along with other children • Refrain from kicking, biting, or hitting other children or adults	0–2
Early Literacy and Numeracy Skills	Child's early alphabet and number recognition	Composite score constructed by adding the number of activities that the mother reported the child can successfully perform, from the following: • Name at least ten letters of the alphabet • Read at least four simple, popular words • Name and recognize the symbol of all numbers from one to ten	0–3

Table 1. Description and Measurement of Early Development Domains Source: Based on MICS 2012.

Preprimary education and family-based interventions are tested as the key predictors of early development outcomes. For preprimary education, the analysis relies on a dichotomous variable from MICS on whether children between the ages of three and four attend any institutionalized early learning program—privately or publicly provided—including kindergarten or community childcare. The variable on family-based interventions is constructed by adding the different types of interactions that the child's mother or another adult at the household has with the child in a seven-day interval. These interactions are early stimulants that motivate the child to explore and learn, and include reading books or looking at pictures in books, singing, telling stories, taking the child outside the home, playing with the child, and spending time with the child. Both independent variables are reported by the child's mother or primary caretaker. Box 1 describes the empirical strategy followed.

Multivariable regression analyses are conducted to test the relationship between preprimary education and family-based interventions with early childhood development outcomes. To account for the hierarchical structure of the data—individual child measures are nested under households—standard errors are clustered at the household level. All models control for a standard set of covariates including the child's age and gender and an indication on whether the child has ever been breastfed. In the absence of a variable on household income in the MICS survey, the level of education of the child's mother, and the number of children's books at home are used as proxies for socioeconomic status. Results for all regression models are reported in annex table A2. Annex table A3 presents coefficients of interest expressed in standard deviations.

Box 1. Empirical Strategy for the Early Development Analysis

Preprimary education is strongly associated with better early development outcomes for children in Qatar. The coefficient of the composite index on the holistic development of the child is positive and statistically significant at the 99 percent confidence level, suggesting that children are more likely to reach their developmental potential when they attend a preprimary education program at age three or four. The magnitude of this association is quite large, corresponding to an increase of half a standard deviation (SD) in the constructed index.

Preprimary education is also associated with each of the developmental domains. The strongest association is found with the development of early literacy and numeracy skills (0.54 SD). Attendance to an early education program is also associated with the development of early socioemotional skills and children's executive function and self-regulation skills, corresponding to an increase of 0.15 and 0.16 standard deviations in each domain, respectively.

Family-based interventions are also associated with children's early development. The coefficient on the child's holistic development is positive and statistically significant at the 95 percent confidence level, indicating that children who interact with adults at home, through play, singing, reading of books, and other activities, are likely to have better developmental outcomes. The size of this association is substantially smaller than that of preprimary education, corresponding to an increase of 0.04 standard deviations in the composite index. Box 3 presents caveats and limitations to the interpretation of these results.

Evidence of long-term learning outcomes

Consistent with the global literature, the previous analysis provided evidence that preprimary education is strongly associated with development outcomes of children ages three to five in Qatar. This section tests whether the associated benefits of preprimary education are also observed later in a student's life.

The empirical analysis relies on data collected in the Program for International Student Assessment (PISA). The last round of PISA was administered in Qatar in 2015 to a nationally representative sample of 15-year-old students in public as well as private schools. Specifically, the analysis uses science, mathematics, and reading scores of students, as well as student, family, and school-level characteristics collected through the student and school principal questionnaires. This results in a study sample of 8,744 students in 163 schools in Qatar. Annex table A4 presents descriptive statistics for this sample.

Learning outcomes of 15-year-old students in PISA are measured in three domains: (1) science, (2) reading, and (3) mathematics. Students take a two-hour computer-based test in which they are asked to solve tasks from all three domains. Table 2 provides a brief overview of how these domains are defined and tested.

PISA Domain	Definition of the Domain	How it is Tested
Science	Student's ability to engage with science-related issues, and with the ideas of science, as a reflective citizen	Students are asked to explain phenomena scientifically (based on knowledge of scientific facts and ideas), evaluate and designing scientific enquiry, and interpret data and evidence scientifically.
Reading	Student's understanding, using, reflecting on and engaging with written texts, in order to achieve one's goals, develop one's knowledge and potential, and participate in society	Students are tested in retrieving information from written texts, forming a broad understanding, developing an interpretation, and evaluating the content and form of a text.
Mathematics	Student's capacity to formulate, employ and interpret mathematics in a variety of contexts; it includes reasoning mathematically and using mathematical concepts, procedures, facts and tools to describe, explain and predict phenomena	Students are asked to formulate situations mathematically, employ mathematical concepts, facts, procedures and reasoning, and interpret, apply and evaluate mathematical outcomes.

Table 2. Description and Measurement of PISA Domains Source: OECD 2016.

Preprimary education is tested as the key predictor of learning outcomes at age 15. Specifically, a dichotomous variable is constructed, which takes a value of one if the student attended preprimary education at age three, four and/or five, as reported in the PISA student questionnaire. As described before, this includes any institutionalized early learning program—privately or publicly provided— but excludes purely family-based arrangements (UNESCO 2011). The variable takes a value of zero if students did not attend preprimary education, or only attended preprimary early (ages one or two) or late (age six). Box 2 describes the empirical strategy followed.

Multivariable regression analyses are conducted to test the relationship between preprimary education and PISA test scores in science, reading and mathematics. To account for PISA's complex survey design in the estimation of sampling variances, the repest Stata module is used. This estimates statistics using replicate weights (balanced repeated replication or BRR). It also allows for analyses with multiply imputed variables (plausible values). All models control for a standard set of covariates at the student-level including the student's gender and grade. PISA's index of economic, social and cultural status (ESCS) is used as a proxy for students' socioeconomic status. This index is constructed on the basis of the following variables: the International Socio-Economic Index of Occupational Status (ISEI); the highest level of education of the student's parents, converted into years of schooling; the PISA index of family wealth; the PISA index of home educational resources; and the PISA index of possessions related to "classical" culture in the family home. At the school level, the models control for school type, student-computer ratio and teacher's level of education. Control variables are added gradually in models 1-3 for robustness check. Results for all regression models are reported in annex table A5.

Box 2. Empirical Strategy for PISA Analysis

Attending preprimary education at age three, four and/or five is strongly associated with higher test scores in PISA across all three domains. The coefficients for science, mathematics, and reading are positive and statistically significant at the 99 percent confidence level, suggesting that students are more likely to score higher in the PISA test if they attended preprimary education at age thee, four and/or five.

The magnitude of the association is particularly sizeable, given the time elapsed between attending preprimary and taking the PISA test. In science and reading, students scored on average nine points higher than their peers who did not attend preprimary education. In mathematics, they scored around 11 points higher. With 30 points in the PISA scale considered equivalent to one year of schooling (OECD 2016), these results suggest that students in Qatar

who attended preprimary education at age three, four and/or five are, by the age of 15, approximately three months of schooling ahead of students who did not attend. The magnitude of this association is particularly sizeable given the time between preprimary education and the PISA test (ten years).

Implications and limitations

Findings from both analyses point to preprimary education as a key driver for improved early development outcomes and later learning outcomes in Qatar. With the qualifications in box 3 as a caveat, findings from the above analyses provide strong evidence to increase enrollment in preprimary education programs, such as kindergarten, as well as to strengthen the quality and quantity of interactions with children at home. Overall, these interventions in Qatar may lead to improved early development outcomes in literacy, numeracy, socioemotional, executive functioning, and self-regulating skills, with potential benefits persisting through to secondary school, improving students' proficiency in science, mathematics, and reading.

- Although the results from the regression analyses are consistent with the global literature, they are also vulnerable to endogeneity concerns and the potential of omitted variable bias. As participation in ECE is constructed using observational data—and thus not randomly assigned—it is likely that it is correlated with unobservable factors that also influence the early development outcomes of children and learning outcomes at age 15. If so, results cannot be interpreted causally, but instead as associations.

- The data provided for conducting these analyses did not include the nationality of the child. As such, it is not possible to disaggregate the results for Qatari and non-Qatari children.

- All measures from MICS are reported by the child's mother or primary caretaker. As such, they are likely to be subject to social desirability bias—a tendency of survey respondents to answer questions in a manner that will be viewed favorably by others—introducing some bias in the estimators. However, the degree to which this bias may interfere with the interpretation of the study results is likely to be modest as both dependent and independent variables would be affected in the same direction.

Box 3. Caveats and Limitations for Interpreting the Results

Chapter 3

Assessment and Recommendations for ECD Policies in Qatar

Having examined the status of early development outcomes in Qatar (section 1), and the evidence of specific interventions to improve these outcomes in the country (section 2), this section takes a systemic view, analyzing the policies governing ECD in Qatar. The Systems Approach for Better Education Results–Early Childhood Development (SABER–ECD) is used to conduct a holistic assessment of how the overall policy environment in Qatar affects young children's development. This section also outlines priority areas for policy action in each area assessed.

SABER–ECD Framework

The SABER–ECD collects, analyzes, and disseminates comprehensive information on ECD policies around the world. In each participating country, extensive multisectoral information is collected on ECD policies and programs through a desk review of available government documents, data and literature, and interviews with a range of ECD stakeholders, including government officials, service providers, civil society, development partners and scholars. The SABER–ECD framework presents a holistic and integrated assessment of how the overall policy environment in a country affects young children's development. This assessment can be used to identify how countries address the same policy challenges related to ECD, with the ultimate goal of designing effective policies for young children and their families.

SABER–ECD identifies three core policy goals that countries should address to ensure optimal ECD outcomes: (1) Establishing an Enabling Environment, (2) Implementing Widely and (3) Monitoring and Assuring Quality. Improving ECD requires an integrated approach to address all three goals. As described in figure 7, for each policy goal, a series of policy levers is identified, through which decision-makers can strengthen ECD. Strengthening ECD policies can be viewed as a continuum; as described in table 3, countries can range from a latent to advanced level of development within the different policy levers and goals.

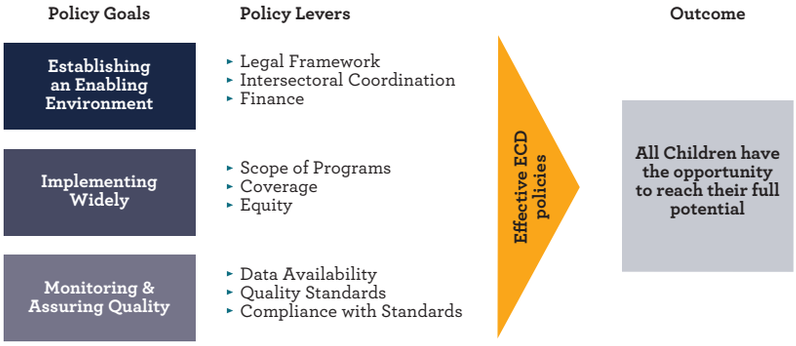

Figure 7. Three Core ECD Policy Goals Source: Neuman and Devercelli 2013.

ECD Policy Goal	Level of Development			
	LATENT	EMERGING	ESTABLISHED	ADVANCED
Establishing an Enabling Environment	Non-existent legal framework; ad-hoc financing; low inter-sectoral coordination.	Minimal legal framework; some programs with sustained financing; some inter-sectoral coordination.	Regulations in some sectors; functioning inter-sectoral coordination; sustained financing.	Developed legal framework; robust inter-institutional coordination; sustained financing.
Implementing Widely	Low coverage; pilot programs in some sectors; high inequality in access and outcomes.	Coverage expanding but gaps remain; programs established in a few sectors; inequality in access and outcomes.	Near-universal coverage in some sectors; established programs in most sectors; low inequality in access.	Universal coverage; comprehensive strategies across sectors; integrated services for all, some tailored and targeted.
Monitoring and Assuring Quality	Minimal survey data available; limited standards for provision of ECD services; no enforcement.	Information on outcomes at national level; standards for services exist in some sectors; no system to monitor compliance.	Information on outcomes at national, regional and local levels; standards for services exist for most sectors; system in place to regularly monitor compliance.	Information on outcomes from national to individual levels; standards exist for all sectors; system in place to regularly monitor and enforce compliance.

Table 3. ECD Policy Goals and Levels of Development Source: Neuman and Devercelli 2013.

Policy Goal 1: Establishing an enabling environment

An Enabling Environment is the foundation for the design and implementation of effective ECD policies (Brinkerhoff 2004; Britto and Boller 2011; Vargas-Baron 2005). An enabling environment consists of (1) the existence of an adequate legal and regulatory framework to support ECD; (2) coordination within sectors and across institutions to deliver services effectively; and (3) sufficient fiscal resources with transparent and efficient allocation mechanisms.

Policy Lever 1.1: Legal Framework (Rating: Emerging)

Assessment of Legal Framework Policies The legal framework comprises all laws and regulations that can affect the development of young children in a country. The laws and regulations that impact ECD are diverse due to the array of sectors that influence ECD, and because of the different constituencies that ECD policy can and should target, including pregnant women, young children, parents, and caregivers. Key laws and regulations governing ECD in Qatar are presented in box 4. Qatar has made important strides to ensure the establishment of a minimal legal framework, the characteristics of which are described below.

- Law No. 7, 1996, Organizing Medical Treatment and Health Services in the State
- Education Law No. 25, 2001, mandating education starting at age 6
- Human Resources Law, 2008, on maternity leave and workplace protections
- Law No. 1, 2014, Regulating Nurseries

Box 4. Key Laws and Regulations Governing ECD in Qatar

National laws and policies in Qatar promote healthcare for pregnant women. According to Law No. 7, 1996, Organizing Medical Treatment and Health Services within the State, no fees shall be charged for preventative services in the field of maternity. It covers national and non-nationals. This means that all women have a legal right to free antenatal care and a skilled delivery at government health facilities.

National laws and policies also promote healthcare for young children. For all residents of Qatar, no fees are charged for (1) emergency cases and cases requiring hospitalization; (2) preventative services related to maternity and childhood; (3) preventative services related to school health for students; and (4) medical interventions to control infectious diseases and provide vaccinations. Well-child visits are required and are scheduled for birth, two months, four months, six months, nine months, 12 months, 15 months, 18 months, 30 months, and four years of age. The Ministry of Public Health (MOPH) has established an immunization schedule from birth to teenage years that requires a full course of vaccinations.

The Government of Qatar (GOQ) has some policies in place to promote breastfeeding, but may be able to expand efforts. Recognizing the importance of breastfeeding, the Qatar National Nutrition and Physical Activity Action Plan 2011-2016 included the objectives of planning national guidelines to promote breastfeeding, establishing nutrition and breastfeeding guidelines for all sectors in Qatar, and providing high quality nutrition and breastfeeding counseling at all health centers in Qatar. Any future national nutrition plans could emphasize breastfeeding as a prominent part of a strategy to improve nutrition.

Implementation of the International Code of Marketing of Breast milk Substitutes is an important component of a strategy to increase breastfeeding rates. While Qatar has incorporated a few provisions of the code, the country could strive towards its full adoption (WHO 2013). Most mothers can breastfeed if they have proper information and support, but misinformation and aggressive marketing by producers of breast milk substitutes can influence mothers and families on how to nourish their children. Implementation of the code can reduce the promotion of breast milk substitutes to mothers, and ensure the healthcare system is free from commercial influences.

According to MICS 2012 data, the exclusive breastfeeding rate for below six-month-olds was 19 percent for Qatari citizens, and 35 percent for non-Qataris, with the overall rate for the country standing at 29 percent. Figure 8 shows exclusive breastfeeding rates for several OECD and MENA countries. The WHO Global Nutrition Targets 2025 call for exclusive breastfeeding rates to reach at least 50 percent, a threshold reached only by Bahrain among the countries included in figure 8. To make progress toward this target, Qatar may need to develop comprehensive policies to promote breastfeeding. Babies who are breastfed have lower rates of mortality and morbidity than those who are not, and breast milk contains nutrients and antibodies not found in formula (WHO 2013). An important point for Qatar is that babies who are breastfed are less likely to be obese as children and adults (WHO 2014). Given the high rates of childhood and adult obesity in the country, any steps to reduce the risk of obesity should be seriously considered.

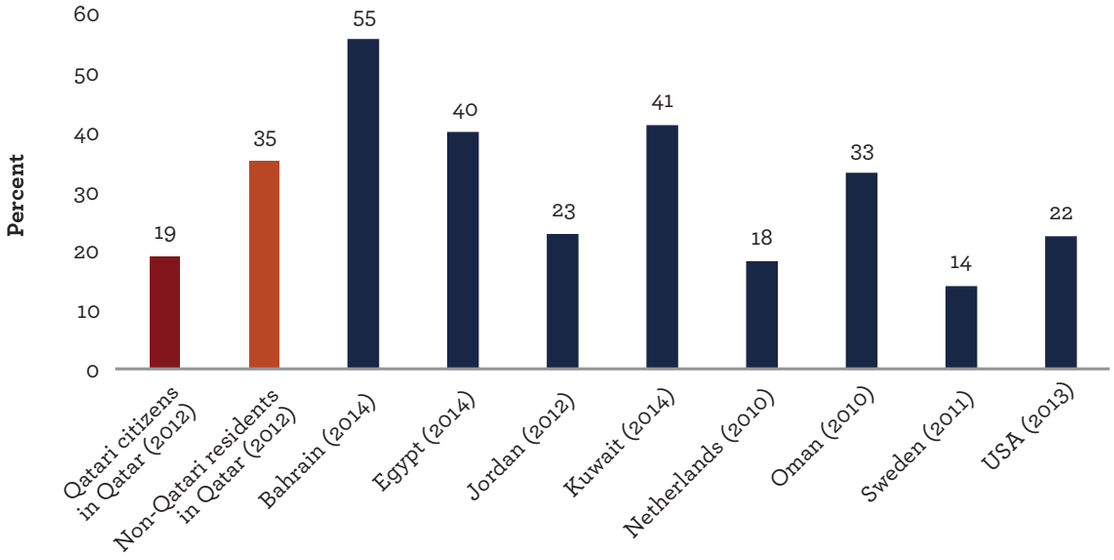

Figure 8. Exclusive Breastfeeding Rates for Below 6-month-olds in MENA and OECD Countries Source: WHO Global Health Observatory Data Repository and Qatar MICS 2012.

National laws and regulations to promote appropriate dietary consumption by pregnant women and children are in place. Under Gulf Cooperation Council Standardization Organization policy, salt iodization and fortification of wheat products with iron are mandatory. Fortifying foods with micronutrients such as iron can be an inexpensive and effective way to improve nutrition among a population (Neuman and Devercelli 2013). According to the WHO Global Prevalence of Anemia in 2011 report, 28 percent of pregnant women and 26 percent of preschool children had anemia in Qatar. These levels of prevalence constitute moderate public health problems according to WHO standards. These figures may be outdated, but attention to the problem is likely still warranted. Anemia can have adverse health effects. Mild anemia may impair productivity in adults and the ability to learn in children, and severe cases can increase the risk of maternal and child mortality (Neuman and Devercelli 2013).

The national nutrition strategy aims to reduce childhood obesity. The Qatar National Nutrition and Physical Activity Action Plan 2011-2016 recognizes the high overweight and obesity rates in Qatar, including among young children. According to the 2006 World Health Survey, 29 percent of children under five in the country are overweight or obese. Children who are overweight are likely to remain overweight as adults, with higher risk for health conditions such as Type 2 diabetes, hypertension, and heart disease (Center for Disease Control and Prevention 2016). Qatar's Nutrition Plan and Physical Activity Action Plan has the goal of reducing mortality and morbidity from non-communicable diseases. It aims to reduce overweight and obesity rates, increase physical activity, and improve residents' nutritional status. For school children, the strategy is to establish comprehensive nutrition programs and healthy eating programs in schools, and implement a national snack program and physical activity programs in every school. It's not clear if all objectives have been met. Given that eating and physical activity habits are established at a very young age, the GOQ should ensure that these objectives are implemented in nursery programs and preprimary schools, in addition to primary and secondary schools.

Policies to protect pregnant women and to provide parents with opportunities for adequate caregiving could be improved. The Qatar Human Resources Law (2008) mandates paid maternity leave for employees in both the public and private sectors. Maternity leave is eight weeks for the public sector and seven weeks for the private sector at full pay. Public sector workers receive three days of paternity leave, but paternity leave is not mandated for private sector workers. Table 4 provides a sample of parental leave policies from upper-middle income and high-income countries, all of which provide longer maternity leave than Qatar. Qatar's maternity leave policy allows for fewer days than the comparator countries. Longer maternity leave during the first year to allow for the intense caregiving and bonding that happen during infancy could be considered. On the other hand, paternity leave is increasingly recognized as an important way to strengthen the relationship between father and child, and could be considered in the future.

There are some workplace protections for pregnant women and new mothers, but these could be expanded. The Human Resources Law requires that employers provide breastfeeding breaks, but employers are not required to provide breastfeeding facilities. Qatar does not prohibit dismissal of pregnant workers based on their pregnancy status, nor does it guarantee non-discrimination based on gender (World Bank 2015b).

Qatar	Australia	France	Saudi Arabia	Turkey
56 days'' maternity leave for public sector at full pay; 49 days' maternity leave for private sector at full pay; three days' paternity leave for public sector; no private sector paternity leave	365 days' maternity leave, paid at the equivalent of 126 days' of the federal minimum wage level; 14 days' paid paternity leave	112 days' maternity leave, paid 100% up to a ceiling; 11 days' paternity leave at full pay	70 days' maternity leave; three days' paternity leave for public sector only	112 days' maternity leave; no paternity leave

Source: International Labour Office 2014; SABER–ECD Qatar Policy Instrument 2017.

Table 4. Parental Leave of Select Upper-Middle Income and High-Income Countries

One year of preprimary education is free for Qatari nationals but is not mandatory. Five-year-old Qataris can attend one year of preprimary education prior to primary school entry. Preprimary programs for children ages four and below must be paid for by parents. The exception is nursery programs in government buildings for the children of government employees. Qatari law currently mandates that children start attending school by age six, at which point the Ministry of Education and Higher Education (MOEHE) is responsible for providing free education (Education Law No. 25, 2001). Non-nationals must pay fees to attend all preprimary education.

Preprimary education in Qatar is comprised of both public and private schools, and is staffed by a workforce that is largely comprised of non-nationals. According to the Annual Statistics of Education of the State of Qatar Report, in the 2014–2015 school year there were 252 preprimary schools in the country, with 1,985 classes, and 3,008 preprimary teachers, serving a total of 42,615 students. Fifty-one percent of students were boys and 49 percent were girls. Approximately 24 percent of the teachers are Qatari. However, in public preprimary schools, staff are predominately Qatari. In nurseries, staff are predominately non-Qatari. Approximately 74 percent of preprimary schools are private, while the remaining are public. Most schools are concentrated in Al-Rayyan and Doha municipalities.[7]

Children between the ages of infancy and four years attend nurseries. Based on Ministry of Administrative Development, Labor and Social Affairs (MADLSA) statistics, in the 2015-2016 school year there were 7,524 children in nurseries. There were 14 Arabic language nurseries and 132 international nurseries. Some nurseries are operated by individuals, while others are semi-government institutions.

7 Public provision of preprimary education in Qatar started more than a decade ago. Moza Bint Mohammed and Jouan Bin Jassem established two preprimary schools in 2001 and 2002 under the Developed Schools project. In 2003 and 2004, two additional public preprimary schools were established. Shortly after that, the Supreme Education Council began supporting efforts to expand public provision at scale, as part of the education reform effort.

Birth registration is mandatory. All government and private hospitals have MOPH offices to register births. Birth registration is an important component of a child protection system.

It is not clear the extent to which child protection and social protection policies and services exist. Having a strong judicial system that provides for the protection of children is of paramount importance. Few data were available to assess the capabilities of Qatar's judicial system to provide child protection. Qatar could assess if its judicial system includes child-friendly components such as training for judges, lawyers and law enforcement officers on interacting with children; the establishment of specialized courts for children and families; and the creation of specialized child advocates. The government does not have a clear policy to provide vulnerable children and orphans with care and housing. There are few orphans in the country. Dreema, an organization under Qatar Social Work, tries to place orphan children with families in accordance with Islamic principles. Aman, another Qatar Social Work organization, provides protection for abused children. In 2017, consultations were held with staff at preprimary programs to discuss the procedures that should be followed if child abuse is suspected.

Children with special needs have the right to access inclusive education, but there is no policy to provide cross-sectoral services to them. The recently established Department of Special Education and Gifted Education is focused on ensuring education for children with disabilities. According to the Additional Educational Support Policy, children with special needs have the right to access inclusive education. The GOQ may want to consider adopting a policy to guarantee provision of a range of services to children with special needs. Without such a policy, the inclusion of children with special needs in education and society more broadly is likely to be more limited. The reason is that to thrive, children with special needs frequently require several different specialized services, such as healthcare, and physical, speech, and emotional therapies, as well as support for their families. Currently, these types of services may be provided by the Ro'aa Center in cooperation with Romaila Hospital, but it would nevertheless be important to articulate a policy that guarantees access to such services.

Policy Options for Strengthening the Legal Framework

A stronger ECD legal framework can better protect and promote ECD rights for parents and their families. The GOQ has several components of a strong legal framework for ECD, including free provision of healthcare for young children and pregnant women, mandated birth registration, and fortification of food staples with micronutrients. The country could strengthen its legal framework by expanding on some of its existing policies.

The GOQ could expand programs to promote breastfeeding given the relatively low rates of breastfeeding in the country and the importance of the practice for promoting child health. For example, while breastfeeding promotion is a priority in the National Nutrition Strategy, more work needs to be done to increase the rate for exclusive breastfeeding. Families in Qatar should be educated on the importance of breastfeeding for their babies' health. Breastfeeding requires support from healthcare workers and other policies to facilitate the practice. The GOQ could consider adopting all provisions of the International Code of Marketing of Breast-milk Substitutes. Employers and public facilities should make breastfeeding facilities available to nursing mothers.

To support parents, the GOQ could extend maternity leave and establish paternity leave for private sector workers. Longer parental leave can improve child health and development and allow parents to develop a strong bond with their children. It can also facilitate women's participation in the labor force. Box 5 describes parental leave policy in Sweden, which has one of the world's strongest ECD systems. Through a strong base parental leave policy, and benefits options such as temporary parental leave in case of child illness, and pregnancy benefit in case of physical disability, Sweden's policy supports caretakers and children throughout foreseen and unforeseen stages of pregnancy and early childhood.

Parental insurance in Sweden is designed to benefit both men and women. In total, the leave includes 480 days of paid leave, 60 days of which are earmarked for the mother, 60 days for the father, and the remaining days are divided as the couple chooses. The insurance commences up to seven weeks prior to the expected birth, and parents adopting a child are also eligible. The compensation rate can vary; at a minimum however, 80 percent of the employee's salary is provided during leave. In addition, each parent is legally entitled to take unpaid leave until a child is 18 months old. Additional benefits include: temporary parental leave, which entitles parents 120 days of parental leave annually to care for children below the age of 12 with illness or delay (the child requires a doctor's certificate); a pregnancy benefit, payable for a maximum of 50 days to expectant mothers who are unable to work because of the physically demanding nature of their jobs; and pension rights for childcare years, which partially compensates the loss of future income during the period when the parent is at home with the child.

Source: www.forsakringskassan.se.

Box 5. Parental Leave Policy — Sweden's Parental Insurance Benefit

While Qatar has several programs to help orphans and vulnerable children, it could develop a clear, comprehensive policy on child protection. The GOQ could consider implementing measures in the national judicial system to promote the wellbeing of young children. Children need special provisions and protections in law enforcement to ensure their protection and proper representation. Important features of judicial systems include specialized advocates for young children and child-friendly courts. Qatar could also consider developing a clear policy on government support for orphans, vulnerable children, and trafficked children. It's critical for governments to track levels of child violence and neglect, and to have systems in place to intervene to protect children when needed, through a child welfare system. The components of an established child welfare system include the following: a system to identify and monitor at-risk children, a housing system, and mechanisms to reach children in need with necessary services.

To build on the progress that Qatar has made in recent years on advancing the rights and educational opportunities available to children with special needs, it could now consider adopting a policy to provide cross-sectoral services to children with special needs. The GOQ should work to ensure that children with special needs have access to the variety of services that they may need to promote their development and support their families. Depending on the child, this could include specialized healthcare, as well as physical, occupational, and psychosocial therapies. This would require developing a mechanism for referrals to services when a new diagnosis of a special need is made, and is likely to require training more personnel to provide such services.

Policy Lever 1.2: Intersectoral Coordination (Rating: Latent)

Assessment of Intersectoral Coordination Policies Development in early childhood is a multidimensional process (Naudeau and others 2011; UNESCO–OREALC 2004; Neuman 2007.) To meet children's diverse needs during the early years, government coordination is essential, both horizontally across different sectors, as well as vertically from the local to national levels. In many countries, non-state actors also participate in ECD service delivery; for this reason, mechanisms to coordinate with non-state actors are also essential.

The GOQ does not have an explicitly stated multisectoral ECD strategy. The Early Years Department at the MOEHE is developing an education strategy for the early years' period. Qatar has a sectoral strategy for nutrition, but this strategy is not specific to the early childhood period. The country currently lacks a strategy focusing on the early childhood period that incorporates education, health, nutrition, social protection, and child protection. Inclusion of all these sectors is necessary to reflect the multidimensional nature of child development. The Department of Early Years Education under MOEHE is well on the way to completing an ECE strategy.

The Education and Training Sector Strategy (ETSS) 2011–2016 largely overlooked preprimary education, but the education strategy 2017-2022 includes a substantial preprimary component. The new strategy notes the benefits of early childhood programs to individuals and society, both in the near term and in the long term, and recognizes ECD as an effective investment. The 2017-2022 preprimary education goals include the following: increase the enrollment rate to be in line with international standards (partly through the gradual reduction of the compulsory age of education to five years); concentrate investments to further develop education in the nursery stage (zero to three), identify where the sector should prioritize the expansion of formal care, and increase quality in these centers; review and standardize the ECE curriculum; develop and intensify preparation programs for early childhood teachers and school leaders; develop vocational training and support for ECE teachers; develop and implement awareness campaigns to encourage ECE enrollment; and develop a database for the early childhood education stage, including collecting and evaluating key performance indicators.

Responsibility for early childhood education is split between the MOEHE and MADLSA. There is no clear institutional anchor to coordinate work for children from birth through primary school entry. The Early Years Department at the MOEHE covers children between ages four and seven. This Department was established in 2016, and marks an important shift toward recognizing the importance of having a unit with expertise and authority specifically for early childhood education. A subcommittee focusing on preprimary education is expected to be established soon. The MOEHE's role is (1) to work with stakeholders and the MOEHE to identify and agree on programs to be implemented to support the education strategy; (2) for each program, to identify projects and initiatives to be implemented including timelines, milestones, and deliverables; and (3) to designate a coordinator (a member of the subcommittee) for each program to advise, support, monitor, evaluate, and report on progress. On the other hand, the MADLSA is responsible for children from zero to four years. Due to the split between the two ministries, planning and policymaking take place without much coordination. Qatar's 2017-2012 education strategy acknowledges that the division of responsibilities between ministries for different age groups should be addressed to increase coherence and comprehensiveness of planning and policy formation. The strategy recommends a study to assess the possibility of including nurseries within MOEHE.

The government has not established a menu of coordinated ECD services that should be available, although the ETSS2 outlines several goals and projects. Qatar's ECD service providers currently do not work in a coordinated fashion. For example, there is not a clear plan of action and coordination for a child requiring medical, educational, and social interventions.

There is some collaboration between state and non-state stakeholders working on early childhood education, but more formal mechanisms could be useful. The MOEHE has partnerships with private and quasi-governmental actors through activities such as exchanging expertise and sharing curricula and books. In addition, there is cooperation in hosting events and activities for children. Some private schools provide training and capacity building for the public sector in exchange for using government land and other support to set up the schools, but there is no focal point in the MOEHE with which to coordinate and arrange training. The MOEHE could consider establishing a formal system for this type of collaboration.

Policy Options for Strengthening Intersectoral Coordination The GOQ's 'latent' scoring on intersectoral coordination indicates the potential and need for significant improvements in coordination among ECD stakeholders. Establishment of an institutional anchor for coordination followed by the development of a multisectoral ECD strategy can enhance coordination.

The GOQ could establish an institutional anchor to coordinate ECD across sectors. For the reasons described above, some mechanism to coordinate across and within institutions is essential. Coordination is particularly important given that responsibility for different age groups is split between MADLSA and MOEHE. Coordination between these ministries is crucial to ensure coherence of programs and services. Coordination with the MOPH and the private institutions involved in early childhood services is also important. This coordination role could be led by a key stakeholder. Alternatively, a collaborative effort by stakeholders to implement a major early childhood project could serve as a starting point for cooperation between ministries, with official formalized roles taking shape as the project progresses. One priority project could be the development of a continuous, coherent curriculum for children across ages zero to six. Box 6 provides a description of the ECD coordination body in Jamaica, which included representatives from legislative, political, private, and technical sectors. In addition to establishing a coordinating entity, the GOQ could develop a menu of services of what is (and could be) available, as well as set in place processes for coordination at the point of service delivery. This would likely yield efficiency gains, as well as improve the likelihood that children will receive the services they need.

A multisectoral ECD policy is a comprehensive document that articulates services provided to children and key stakeholders, including service providers' and policy makers' responsibilities. The policy should also present the legal and regulatory framework in a country and address possible gaps. Typically, a policy includes a set of goals or objectives and an implementation plan outlining how to achieve them. The benefits of doing so are manifold. All stakeholders must contribute, which in turn promotes a holistic approach to ECD and identifies any duplication of objectives by individual stakeholders. Another benefit is that the policy framework clarifies stakeholders' boundaries for operation and creates an accountability mechanism.

Jamaica. The Early Childhood Commission (ECC) was established by an act of Parliament in 2003 to develop standards and regulations for ECEC facilities, advise the Minister of Education on policy matters related to early childhood, assist in strategic planning, and monitor programs' implementation. In 2005, parliament passed the Early Childhood Act, which proscribes the policies, regulations, and standards governing ECD in Jamaica. By law, the ECC includes representatives of all key ministries, the executive branch, the opposition political party, non-state actors, and ECD experts. This broad inclusion is critical to the efficacy and sustainability of the commission's work; although the political party in charge changed midway through the process, it did not disrupt the work. Critically, the ECC also has legislative authority to enforce standards and impose sanctions, including financial penalties.

Chile. In 2005, Chile introduced a new intersectoral policy for ECD entitled *Chile Crece Contigo* (CCC, Chile Grows with You). The multidisciplinary approach is designed to achieve high-quality ECD by protecting children from conception with relevant and timely services that provide opportunities for early stimulation and development. A core element is that it provides differentiated support and guarantees children from the poorest 40 percent of households key services including free access to preprimary school. Furthermore, the CCC mandates providing services to orphans, vulnerable children, and children with special needs. A multisectoral, highly synergistic approach at all levels of government led to the CCC's creation and implementation. At the central level, the Presidential Council is responsible for the development, planning, and budgeting of the program. At each of the national, regional, provincial, and local levels there are institutional bodies tasked with supervision, support, and operative action, as well as development, planning, and budgeting for each respective level. The Chile Crece Contigo Law (no. 20.379) was created in 2009.

Source: Naudeau and others 2001; UNICEF 2006.Box 6. Benefits of Multisectoral Policy Design and Implementation — Jamaica and Chile

Box 6. Benefits of Multisectoral Policy Design and Implementation—Jamaica and Chile

The GOQ could develop an explicit multisectoral policy for ECD, encompassing the education, health, nutrition, and child and social protection sectors. Qatar has an education policy, a nutrition policy, and a health policy, but there is no policy that focuses on the early childhood period and includes all essential sectors.[8] Examples of multisectoral ECD policies that might be relevant for the Qatari context include Jamaica and Chile, both of which delegated well-articulated responsibilities across stakeholders and accountability mechanisms for their enforcement. These examples are presented in box 6. Aligned and comprehensive policy planning is critical to ensure children's holistic development. Alternatively, it is also possible to achieve comprehensive policy planning through individual sectoral strategies, as long as the policies and interventions for young children are clearly delineated—and mechanisms to coordinate across policies in individual sectors exist.

Policy Lever 1.3: Finance (Rating: Established)

Assessment of Finance Policies Investments in ECD can yield high public returns, but are often undersupplied without adequate financing. Investments during the early years can yield greater returns than equivalent investments made later in a child's life, and can lead to long-lasting intergenerational benefits (Valerio and Garcia 2012; WHO 2005; Hanushek and Kimko 2000; Hanushek and Luque 2003). Not only do investments in ECD generate high and persistent returns, they can also enhance the effectiveness of other social investments and help governments address multiple priorities with single investments. While legal frameworks and intersectoral coordination are crucial to establishing an enabling environment for ECD, an adequate financial investment is key to ensure that resources are available to implement policies and achieve service provision goals.

Defined criteria are used in budgeting for education and health, but not in other sectors. In health, budget considerations look at the utilization rates of services. In education, the number of children enrolled and staff positions are the main criteria considered when assigning funds. Although these criteria inform budgeting, it's not clear whether a clear formula is used. Using explicit criteria and budget formulas is important for both transparency and efficiency.

Budgeting is not a coordinated effort across ministries. Given that multiple ministries are involved in ECD, it's important that there is some coordination and communication in how they allocate their funding so that there is not overlap or gaps. Some coordination could be achieved through a joint budget planning session attended by all relevant actors or an established budget planning committee that includes all essential sectors.

The government cannot accurately report on ECD expenditure. Yet, available evidence suggests that level of expenditure on education may not be sufficient to support a high-quality early childhood education system. Spending on

8 The ETSS2 may have some elements of such a plan, but the draft was not available for this study.

ECD programs is likely spread out among numerous ministries, and there is currently no way to disaggregate this spending from broader budgets in health, nutrition, and social protection. The GOQ may wish to consider establishing budget systems that allow for tracking spending specific to young children. Available estimates from the education sector indicate that only 4.4 percent of total education expenditure is spent on the preprimary level (UNESCO Institute for Statistics database, data is for 2009). This figure is somewhat outdated, but suggests that spending on preprimary education in Qatar is well below what would be expected given the country's high level of economic development. Box 7 provides a discussion of spending levels on preprimary education across comparator countries.

Despite the overwhelming evidence of the importance of reaching children during the early years, and the high returns to investments in ECD, the vast majority of the world's governments do not allocate adequate financing to meet the needs of young children. Most countries spend significantly more money financing primary, secondary, and higher education than preprimary education.

Figure B7.1 shows that Qatar has the highest GDP per capita of the selection of countries. Yet, at 4.4 percent, Qatar's expenditure on preprimary education as a share of government spending on education is well below the trendline, suggesting an underspending relative to its level of wealth. At its level of economic development, it would be expected that Qatar would spend approximately ten percent of its education expenditure at the preprimary level.

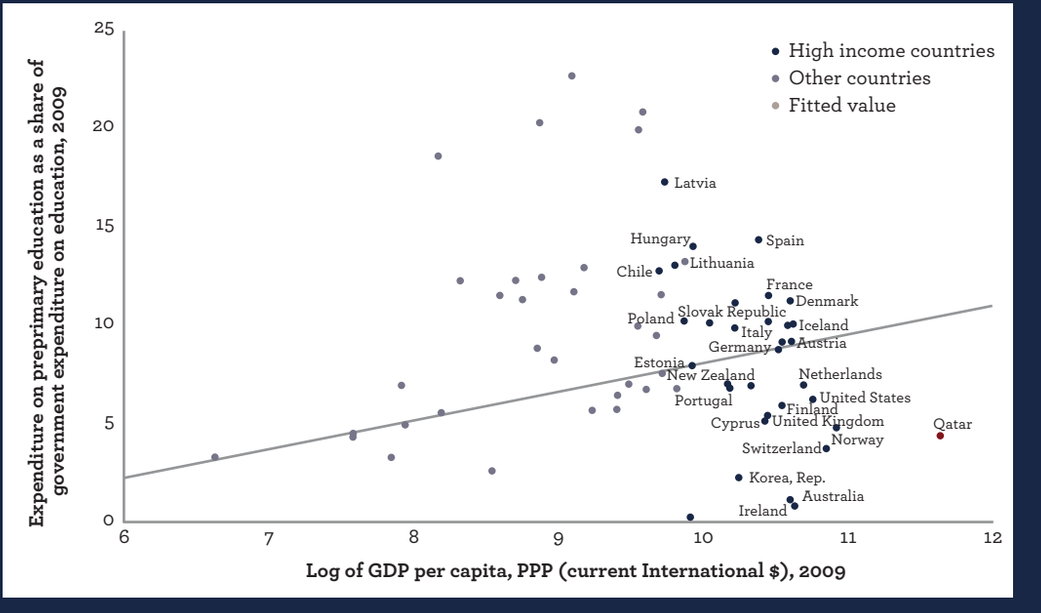

Figure B7.1 Expenditure on Preprimary Education as a Share of Government Expenditure on Education and GDP per Capita, 2009

Source: World Bank, World Development Indicators database.

Qatar's level of government expenditure on preprimary as a percentage of GDP is also below what would be expected given its level of wealth (figure B7.2). In fact, at 0.1 percent, only a handful of countries spend a lower share of their GDP on preprimary education than Qatar does. Qatar would have to increase tenfold its preprimary spending (to a one percent of its GDP) to reach the OECD benchmark (World Bank 2015a).

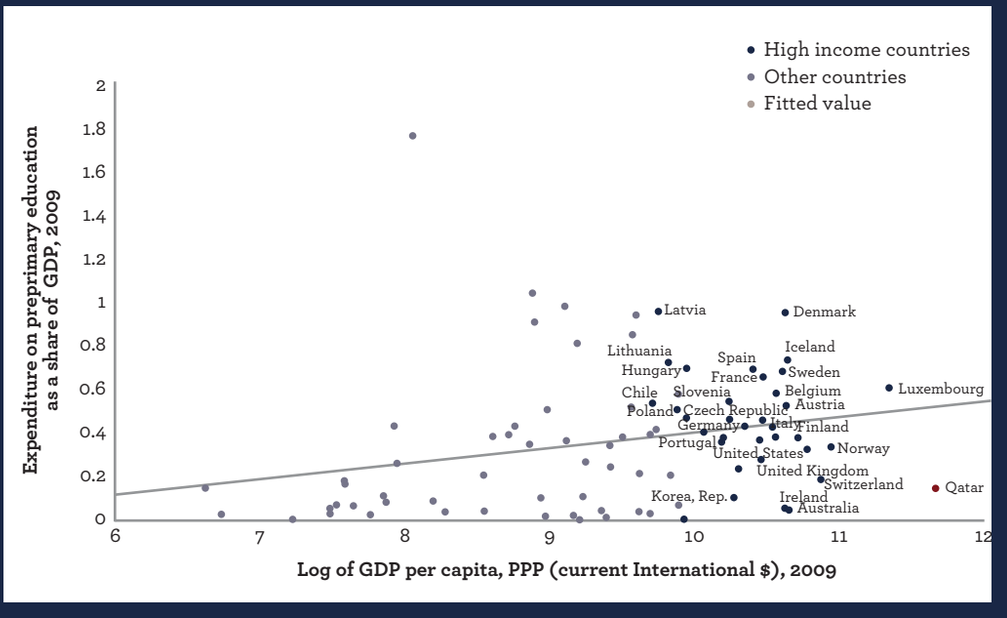

Figure B7.2 Expenditure on Preprimary Education as a Share of GDP and GDP per Capita, 2009

Source: World Bank, World Development Indicators database.

Box 7. Qatar's Level of Spending on Preprimary Education Relative to its Economic Development

Fees are not charged for public health and education services for Qatari nationals. The GOQ fully funds primary healthcare services for all children at public centers. This includes nationals and non-nationals. Qatari nationals and children of Gulf Cooperation Council (GCC) nationals receive one year of free preprimary education for the year preceding primary school entry, with no fees charged. Fees are charged for earlier levels of preprimary education.

The parity in pay between preprimary and primary teachers shows the GOQ's financial commitment to preprimary education. Initial preprimary teachers are remunerated at the same level as initial primary teachers. In many countries, preprimary teachers earn less than primary teachers, which can dissuade talented candidates from entering the field, and can make retention difficult. In Qatar, monthly wages for teachers starting their careers are between 6,000 and 10,000 Qatari Riyals per month depending on qualifications, plus housing and a transportation allowance, without regard to the level of education they are teaching.

Policy Options for Enhancing Finance The GOQ could establish a mechanism to coordinate budgeting across ministries. The adoption of such mechanism would increase the likelihood that the money the government spends on ECD is spent efficiently, by reducing both overlapping funding and funding gaps. This is also related to the recommendations in the Intersectoral Coordination Policy Lever.

The GOQ could also establish mechanisms to enable identification of ECD spending. Information on spending on preprimary education is available, but the figures are outdated and are not compiled in such a way that allows for a comprehensive analysis of spending trends. Moreover, currently, the government does not have systems in place that allow for ongoing, nuanced assessments of ECD spending allocations Good policymaking and resource allocation depend on knowing how much is spent and where; therefore, having the ability to track spending is a crucial element of a strong ECD system.

The GOQ could increase spending on ECE. Despite increases in recent years, enrollment in preprimary education for ages three to six is relatively low, and lags behind the rates for high income countries. There is currently no public provision of programs for children below age three (with the exception of childcare centers at some government offices). Given this, the GOQ could allocate greater public funding to support more investments in ECE.

Policy Goal 2: Implementing Widely

Implementing Widely refers to the scope of ECD programs available, the extent of coverage (as a share of the eligible population) and the degree of equity within ECD service provision. By definition, a focus on ECD involves (at a minimum) interventions in health, nutrition, education, and social and child protection, and should target pregnant women, young children, and their parents and caregivers. A robust ECD policy should include programs in all essential sectors; provide comparable coverage and equitable access across regions and socioeconomic status—especially reaching the most disadvantaged young children and their families.

Policy Lever 2.1: Scope of Programs (Rating: Established)

Assessment of Scope of Programs Effective ECD systems have programs established in all essential sectors (education, health, nutrition and social and child protection) to promote children's holistic development. The scope of programs assesses the extent to which ECD programs across key sectors reach all beneficiaries. Figure 9 presents a summary of the key interventions needed to support young children and their families via different sectors at different stages in a child's life.

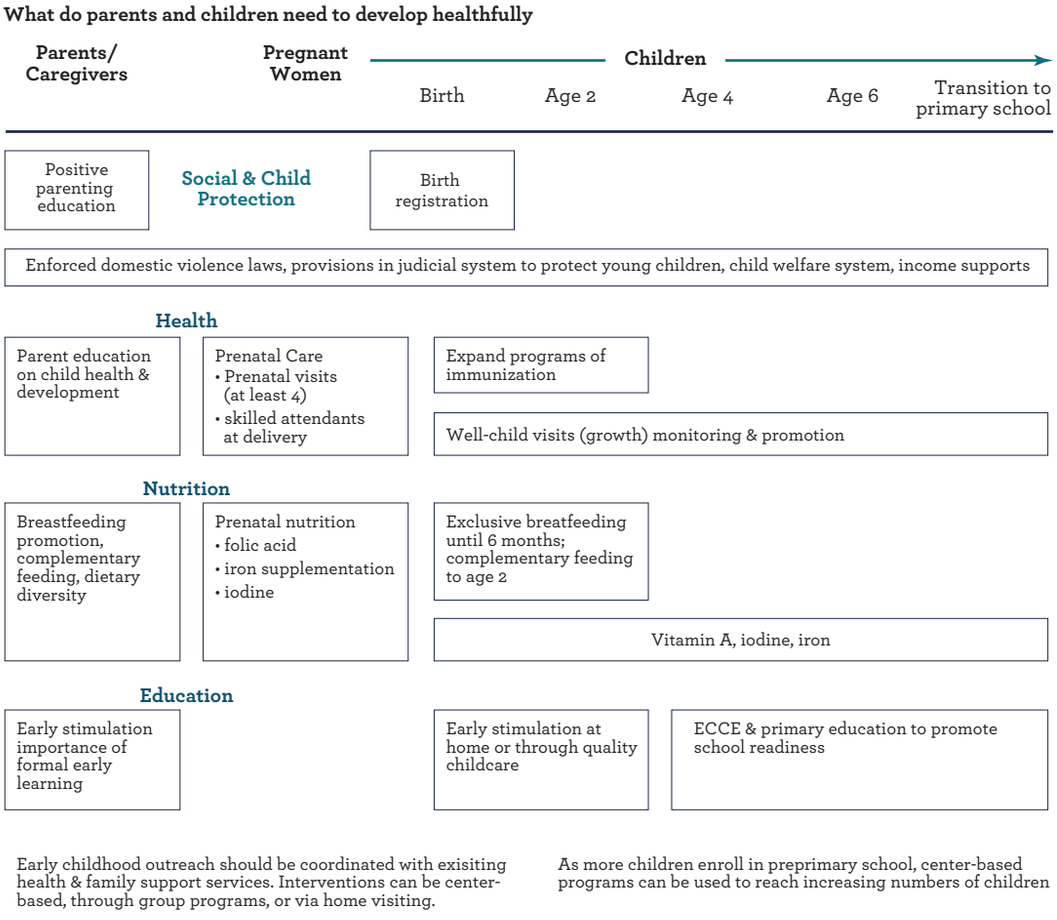

Figure 9. Essential Interventions During Different Periods of Young Children's Development Source: Neuman and Devercelli 2013.

ECD programs are established to target all beneficiary groups in Qatar, although more could be done to target parents. Interventions are established that serve parents, pregnant women, and young children. As shown in figure 10, programs targeting parents are limited to maternal depression screening and treatment (there are also programs to promote parent engagement in preprimary schools, not included in the figure.) The GOQ could consider establishing parenting programs to share messages on child development and positive parenting practices. Programs to enhance the quality of parent-child interactions can significantly improve outcomes for children, both in cognitive and social dimensions. These kinds of messages can be delivered through healthcare workers, community awareness programs, and preprimary programs.

Qatar has established many essential health programs. The Primary Healthcare Corporation provides antenatal care, a comprehensive immunization program, growth monitoring and promotion, and maternal depression screening and treatment.

Due to lack of information, it is difficult to assess the scope of nutrition programs. Qatar has established programs to promote breastfeeding, healthy eating, and exercise to fight childhood obesity, and feeding programs at primary schools. The country mandates salt iodization and wheat fortification with iron. For the SABER–ECD analysis, information was not available on whether programs are established to provide micronutrient support or food supplements to pregnant women and young children.

Several different types of early childhood education programs and social and child protection programs exist. There are both public and private preprimary schools. Community-based ECEC modalities seem to be lacking. Community-based education programs are commonly found in other countries, and can often serve difficult to reach populations, which may be less relevant in Qatar. Several child and social protection programs support orphans and vulnerable children, and children with special needs.

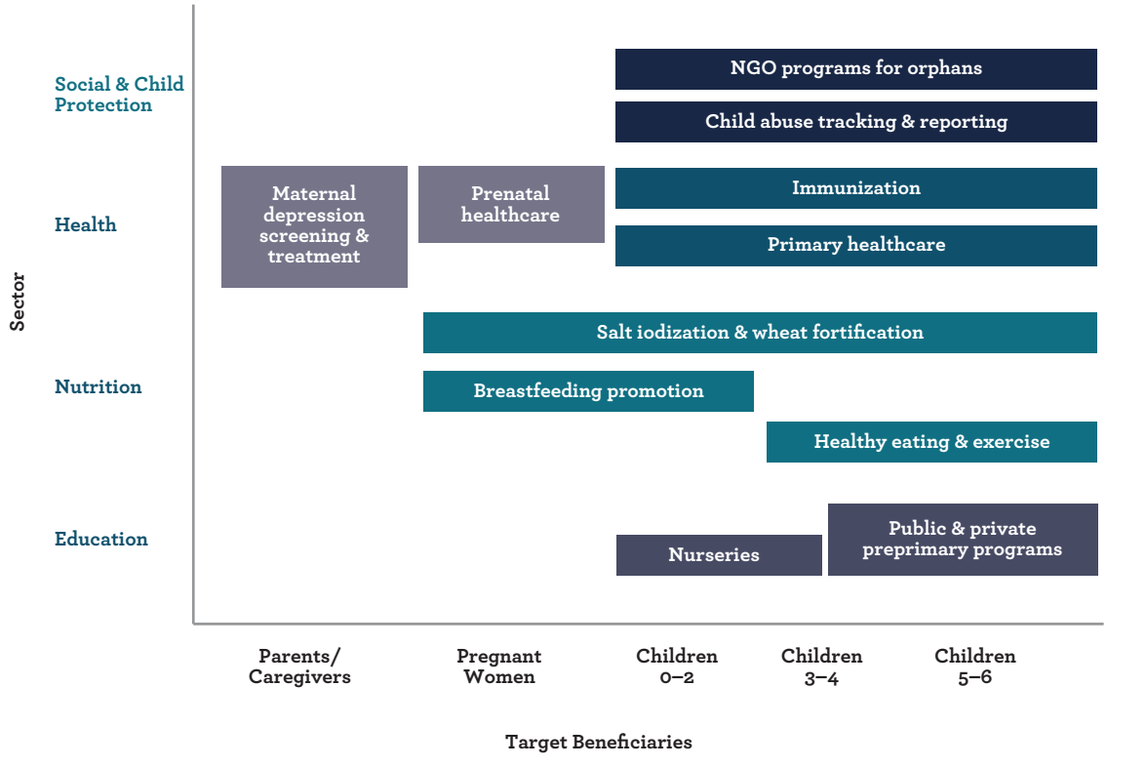

Figure 10. Scope of Interventions in Qatar by Target Population and Sector Source: Compiled from SABER–ECD Policy Instrument for Qatar and supporting documentation 2017.

Program Options for Enhancing Scope of Programs The GOQ could broaden the scope of its ECD programs to expand parenting and caregiver programs to help families support their children's development. The GOQ has a range of programs to benefit children and mothers. For example, the Qatar Nanny Training Academy provides training and qualification to childcare providers (QNTA 2015). Supporting parents to provide developmentally appropriate, positive interactions with their children can improve developmental outcomes and improve the relationships between parents and their children. Given the important role that extended families and paid caregivers (for example, nannies) play in many children's lives in Qatar, it would be beneficial to tailor similar programs for these groups. Box 8 describes a public awareness campaign in Australia that educates parents on the importance of early childhood education using an interactive online portal.

The Australian state of New South Wales (NSW) set a goal for all children to attend a minimum of 600 hours of early childhood education in the year before starting school. To reach that goal the Department of Children and Youth launched the 'It makes you think' campaign to inform and educate parents about the importance of early childhood education.

The campaign is centered around an online portal for parents and caregivers. Interactive and accessible information is presented in an engaging way, informing parents about brain development, and providing evidence and statistics relating to the advantages of early childhood education.

The website encourages parents to 'enroll your child', directing them to a central government website mychild.gov.au. From this online portal, parents and caregivers can locate the nearest preschool or daycare center, and find information including operating hours and fees. Information is also provided on how to access guidance on financial support.

Source: http://www.dec.nsw.gov.au/what-we-offer/regulation-and-accreditation/early-childhood-education-care/funding/start-strong/info-for-parents

Box 8. Targeting Parents: 'It Makes You Think' Campaign New South Wales, Australia

With over 90 percent of the population of Qatar having Internet access, an online parent awareness campaign similar to Australia's online enrollment campaign would be an effective medium for educating parents and the community on early childhood education.

Policy Lever 2.2: Coverage (Rating: Established)

Assessment of Program Coverage A robust ECD system should ensure high degrees of coverage, and reach the entire population equitably—especially the most disadvantaged mothers and young children. As described below, Qatar benefits from a near-universal coverage of ECD programs in some sectors.

Pregnant women have access to essential health services. More than 90 percent of pregnant women in Qatar receive at least one antenatal care visit, and approximately 85 percent of pregnant women receive at least four visits, based on MICS data. A skilled attendant is always at birth. It is not known how many women who are HIV positive receive antiretroviral therapy to prevent mother-to-child transmission. Table 5 presents international comparisons of access to health and nutrition interventions for pregnant women.

	Qatar	Canada	Oman	Turkey	UAE
Skilled attendant at birth	100.0	100.0	98.6	91.3	100.0
Pregnant women receiving antenatal care (at least four visits)	84.5	99.0	96.4	73.7	NA
Prevalence of anemia in pregnant women (2006)	29.1	11.5	42.7	40.2	27.9

Source: UNICEF MICS Country Statistics 2007 – 2011; WHO Global Database on Anemia 2006.

Table 5. International Comparison of Level of Access to Essential Health and Nutrition Interventions for Pregnant Women, 2006 (%)

Access to essential health interventions for young children is high. The immunization rate for Diphtheria, Pertussis, and Tetanus (DPT) for one-year-olds is not known, but is likely to be high given that immunization is a standard part of free child healthcare in the country. The percentage of young children with diarrhea who receive oral rehydration salts and continued feeding is quite high. Table 6 shows young children's access to health and nutrition interventions in Qatar and several other upper-middle income and high-income countries.

	Qatar	Canada	Oman	Turkey	UAE
1-year-old children immunized against DPT (corresponding vaccines DPT3ß)	NA due to small sample size	95.0	98.0	97.0	94.0
Percentage of low birth weight infants	10.6	6.0	9.6	11.0	6.1
Children below 5 with diarrhea receiving oral rehydration salts and continued feeding	68.0	NA	NA	NA	NA
Infants exclusively breastfed until 6 months	29.3	NA	NA	41.6	NA
Prevalence of anemia in preschool aged children	26.2	7.6	50.5	32.6	27.7

Source: UNICEF MICS Country Statistics 2007-2011; WHO Global Database on Anemia 2006.

Table 6. International Comparison of Level of Access to Essential Health and Nutrition Interventions for ECD-aged Children, 2006–2011 (%)

Access to essential nutrition interventions could be improved for pregnant women and young children. Qatar's anemia rate for pregnant women (29.1 percent) is considered a public health problem by WHO standards. This suggests the need for more nutrition interventions such as providing pregnant women with micronutrient supplements, and educating women of reproductive age on appropriate dietary intake of iron-rich foods. The anemia rate for preschool age children (26.2 percent) is also considered a public health problem by WHO standards, and similar nutritional interventions for young children may be indicated. Breastfeeding rates and childhood obesity rates are other key indicators of access to nutrition interventions. As discussed in Policy Lever 1.1: Legal Framework, exclusive breastfeeding rates are low, and childhood obesity rates are high, suggesting the need for more interventions to address those critical public health challenges.

Despite substantial improvements in the past decade, the preprimary enrollment rate in Qatar is low for its level of economic development. The gross enrollment ratio in preprimary education stands at 58 percent (UNESCO Institute of Statistics 2015). This ratio has more than doubled since 2001. There was a steady increase between 2001 and 2007, and then between 2007 and 2009 the ratio increased by 11 percentage points. Between 2009 and 2015 growth in enrollment slowed considerably, increasing from 55 percent to 58 percent (figure 11). This is well behind the average enrollment rate for OECD countries (84 percent) (UNESCO Institute for Statistics database, data is for 2014), and also below what would be expected given Qatar's high level of development (figure 12).

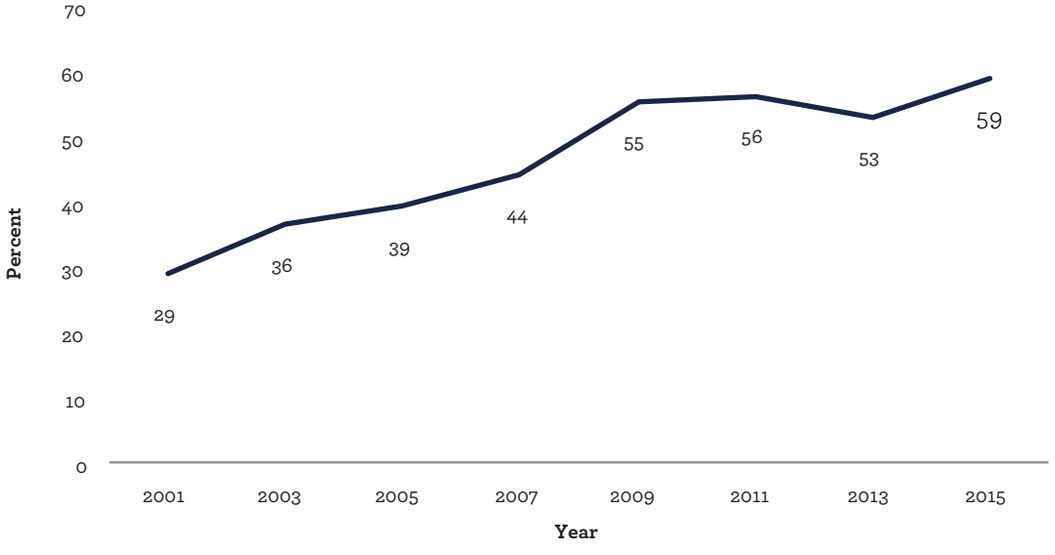

Figure 11. Gross Preprimary Enrollment Ratio in Qatar, 2001–2015 Source: UNESCO Institute for Statistics database.

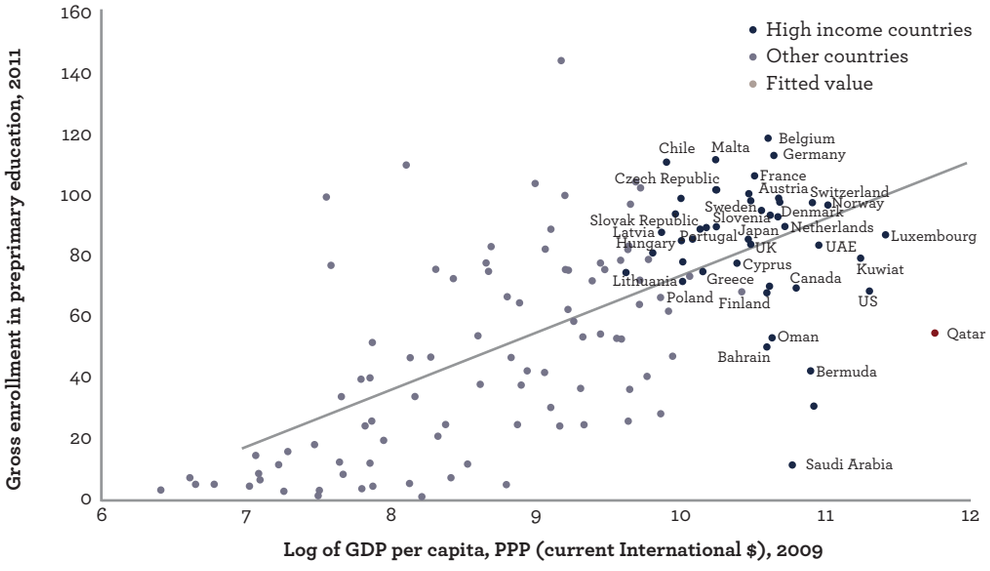

Figure 12. Preprimary Gross Enrollment Ratio and GDP Per Capita, 2011 Source: World Development Indicators database.

Preprimary gross enrollment rates vary considerably throughout MENA countries, with Saudi Arabia at 17 percent, and UAE at 83 percent (table 7). One proposal for increasing preprimary enrollment rates that has been considered in Qatar is to lower the compulsory schooling age from six years old to five years old. Any future efforts to increase enrollment should ensure that education quality is not compromised.

	Qatar	Jordan	Oman	Saudi Arabia	UAE
Gross preprimary enrollment rate	58	32	56	17	83

Source: UNESCO Institute for Statistics database.

Table 7. Preprimary Gross Enrollment Ratio in Select Upper-Middle-Income and High-Income Countries, 2015 (%)

Program Options to Enhance Coverage Qatar has high coverage on most healthcare indicators, but nutrition-related indicators suggest that there could be more and better coverage of nutrition programs. To reduce anemia rates in pregnant women and children as well as obesity rates in young children, nutrition programs could be intensified. These programs could engage multiple ministries and institutions working on various aspects of social policy. This may entail better public awareness on appropriate dietary consumption and exercise, and the importance of a healthy nutritional status for women of reproductive age. Activities to promote healthy eating and exercise could be a part of the preprimary curriculum to establish healthy habits at a young age.

While the preprimary enrollment rate is greater than 50 percent, significant work remains to expand access to high-quality ECE in the country. The preprimary enrollment rate in Qatar has roughly doubled in the last 15 years. Still, the current rate is roughly 30 percentage points lower than the OECD average. The GOQ could work to increase preprimary enrollment as a key strategy to invest in the country's human capital. Supply-driven interventions could advance the GOQ's existing efforts to build new schools and allow for mixed gender classes in less populated areas. A major challenge will be to ensure that expansion of programs do not come at the expense of poor quality.

Expansion should also include demand-driven interventions to increase awareness about the importance of early childhood. A national multimedia awareness campaign could simultaneously target the general public, communities, and parents. The campaign could educate the public on how children develop, why investing in early childhood development is critical, and what community and parents can do to be involved, such as strategies for parental engagement.

Policy Lever 2.3: Equity (Rating: Established)

Assessment of Program Equity One of the fundamental goals of any ECD policy is to provide equitable opportunities to all young children and their families. Given the many positive effects that ECD interventions can have for children from disadvantaged backgrounds, every government could pay special attention to equitable provision of ECD services (Engle and others 2011; Naudeau and others 2011).

In Qatar, equity in access to preprimary education has been established along gender lines; yet, it is unclear whether geographical or socioeconomic disparities exist. Girls and boys enroll in preprimary education at similar rates, with 58.7 and 57.0 net enrollment rates, respectively (UNESCO UIS 2017). Preprimary enrollment rates at the subnational levels are not available, so it is not clear if there are disparities in access by region. The MICS survey typically allows for disaggregation of preprimary enrollment rates by highest and lowest income quintile. However, these items were not included in the specific MICS survey administered in Qatar, precluding equity analysis along socioeconomic lines.

Qatar has an inclusive education policy to promote access to early childhood education for children with special needs. The Additional Education Support Policy outlined in ETSS establishes the right to inclusive education for children with special needs. ETSS calls for "equitable access to quality early education programs for all children regardless of gender, age or ability." In the 2014–2015 school year there were four early childhood classes at the Al-Shafalah Center for Children with Special Needs, attended by 34 students. It is not clear what percentage of young children with special needs is enrolled in early childhood education programs, either in classes focused on special needs children or in mainstream classrooms. In many countries a lack of trained staff and appropriate facilities are barriers to expanding access, as well as social attitudes about inclusion.

Non-Qatari children have slightly higher preprimary attendance rates and home support for learning than Qatari children. Approximately 32 percent of Qatari children attended early childhood education, and 45 percent of non-Qatari children attended (MICS 2012). (The UNESCO UIS enrollment rates cited earlier in this report do not allow for disaggregation by citizen/non-citizen status). On a number of measures of home support for learning, Qatari families fared slightly lower than non-Qatari families. Support for learning includes engaging in activities with a child such as reading, telling stories, singing, naming objects, and counting. See figure 13 for an illustration of these differences. It is difficult to identify possible roots of these disparities, but it does suggest the need for building awareness among Qatari families of the importance of early childhood education, and of the key role that parents and supportive home environments can play in child development.

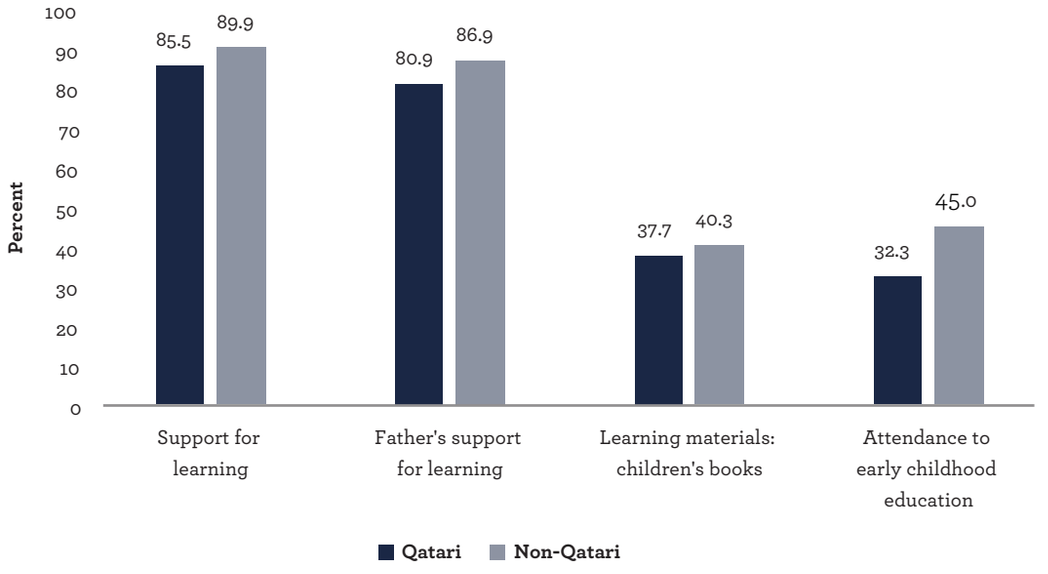

Figure 13. Home Support for Learning and Early Childhood Education Attendance by Citizen/Non-Citizen Status, 2012 Source: MICS 2012.

A reverse pattern is observed in the health sector, where Qataris access antenatal healthcare services at slightly higher rates than non-Qatari residents. See figure 14 for an illustration of these disparities. Skilled attendants at delivery are universal for both groups. The rates of low birth weight infants are similar (10.2 percent and 11.0 percent for Qatari and non-Qatari, respectively). Rates for post-partum stays in health facilities and post-natal health checks for newborns are virtually the same.

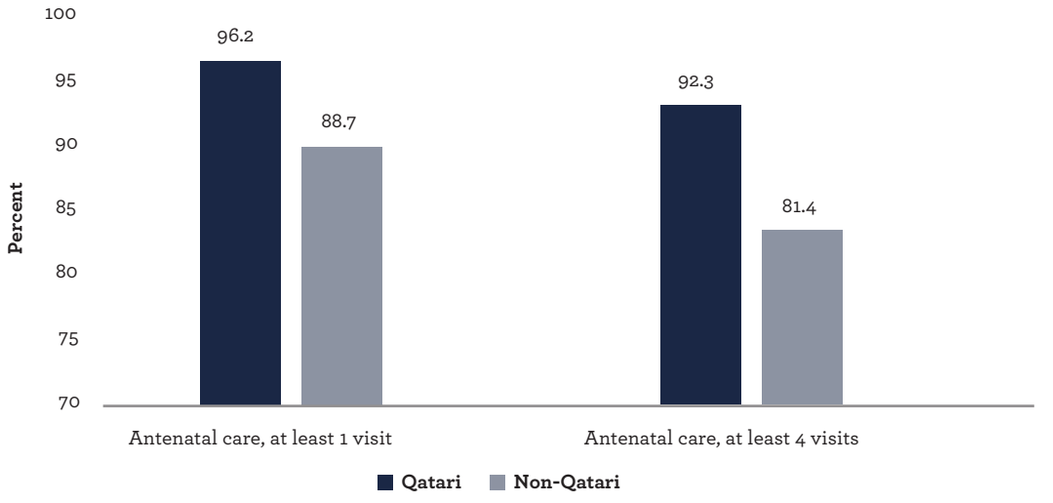

Figure 14. Access to Prenatal Care by Citizen/Non-Citizen Status Source: MICS 2012.

Options to Enhance Equity The GOQ could consider public awareness activities to encourage Qatari families to engage in learning activities with their children and to support their children's enrollment in preprimary education. Qatari children enroll in preprimary education at somewhat lower rates than non-Qatari children do, and on average are provided fewer home learning activities. At home, activities such as talking to children, telling stories, singing songs, counting objects, reading books, and engaging in simple play and games all provide excellent learning opportunities for children and are well within the capabilities of most families. Parents need to know the value of preprimary education to want to enroll their young children in preprimary school—this will be key to increasing the parental and societal demand necessary to increase preprimary enrollment rates.

The GOQ could examine reasons for disparities in access to prenatal health services between Qatari and non-Qatari women. The services are free, so cost would not be a barrier, but there may be other obstacles that are preventing women from accessing these health services.

Policy Goal 3: Monitoring and assuring quality

Ensuring the quality of ECD interventions is vital because unless programs are of high quality, the impact on children can be negligible, or even detrimental (Neuman and Devercelli 2013). Monitoring and assuring quality refers to the existence of information systems to monitor access to ECD services and outcomes across children, standards for ECD services, and systems to monitor and enforce compliance with those standards.

Policy Lever 3.1: Data Availability (Rating: Emerging)

Assessment of Data Availability Policies Accurate, comprehensive, and timely data collection can promote more effective policy-making. Well-developed information systems can improve decision-making. In particular, data can inform policy choices regarding the volume and allocation of public financing, staff recruitment and training, program quality, adherence to standards, and efforts to target children most in need.

Qatar collects some administrative data on education, health, and nutrition services, but not on child and social protection. Table 8 displays some types of data that a country can collect to assess access to ECD services and outcomes. In Qatar, several types of administrative data are gathered; these figures reflect total uptake of services and are typically gathered through a census or at the point of service provision. The GOQ gathers administrative data on enrollment and service usage for education, health, and nutrition programs. It also gathers data on number of service providers who receive training. The GOQ could consider expanding the types of administrative data that are gathered. As discussed under policy lever 1.3 on finance, it is important for each sector to be able to identify its ECD-focused expenditure within the broader sectoral budget. This kind of data is essential for informed policymaking: it can be used to develop new programs and modify existing ones in response to needs identified by data analysis. It would also be useful to have information such as the preprimary enrollment rate by municipality. No administrative data are available on child and social protection systems.

Survey data are available through the Multiple Indicator Cluster Survey (MICS), although more indicators would be useful to assess equity. Participation in MICS is a crucial practice for gathering indicators on health, nutrition, and education. MICS is particularly valuable for assessing equity in a country, as it allows for comparisons between urban and rural areas, and the wealthiest and poorest families. Yet, several MICS indicators are not available for Qatar. Indicators that could be useful include ECE enrollment rates by region, to gauge if there are any differences between urban centers and more rural areas, and enrollment in ECE by family socioeconomic status, to see if there are differences in enrollment patterns between wealthier and poorer families. These data could be useful to design more effective policy interventions.

The ETSS2 emphasizes the importance of data for a strong ECD system. The ETSS2 identifies the lack of available data and use of data in early childhood education, which hampers the ability to plan, monitor, and evaluate. The strategy also calls for greater emphasis on data and outcomes, rather than inputs, and recognizes the potential for using data to improve teaching and learning.

Indicator	Tracked	Type of Data Source
Input Indicators		
Is ECE spending in education sector differentiated within education budget?	No	Administrative
Is ECD spending in health sector differentiated within health budget?	No	Administrative
Average student-to-teacher ratio in public ECE	Yes	Administrative
Average student-to-teacher ratio in private ECE	Yes	Administrative
Process Indicators		
Number of ECE teachers who have received professional development training	Yes	Administrative
Percentage of ECE teachers who meet educational requirements	No	Administrative
Number of ECE teachers who build cooperative relationships with parents [collected at school level but not aggregated]	Yes	Administrative
Number of ECE teachers who use strategies to engage all students in active learning [collected at school level but not aggregated]	Yes	Administrative
Number of nurseries that provide a child-centered, age appropriate learning environment	No	Administrative
Women receiving prenatal nutrition (# of)	No	Administrative
Children benefitting from public nutrition interventions (# of)	No	Administrative
Children attending well-child visits (# of)	Yes	Administrative
Children below age of 5 registered at birth (%)	No	Survey
Children immunized against DPT3 at 12 mo. (%)	No	Survey
Pregnant women who attend at least one antenatal visits (%)	Yes	Survey
Population consuming iodized salt (%)	No	Survey
Outcome indicators		
Individual children's development outcomes	No	Administrative
Population level child development assessment	No	Survey
Anemia prevalence amongst pregnant women (%)	Yes	Survey
Anemia prevalence amongst young children (%)	Yes	Survey
Overweight prevalence amongst young children (%)	Yes	Survey
Children enrolled in ECE by socioeconomic status (%)	No	Survey
Children enrolled in ECE by citizen/non-citizen status (%)	Yes	Survey

Table 8. Availability of Data to Monitor ECD in Qatar Source: Compiled from SABER–ECD Policy Instrument for Qatar and supporting documentation 2017.

Data are available to assess access by gender, municipality, and citizenship status, but not by other background characteristics. For those data that are collected, it's not possible to disaggregate by background characteristics such as socioeconomic status, special needs status, or ethnicity. The ability to disaggregate can promote efficiency and equity by allowing for assessment of service usage and outcomes of special groups. This way, programs, policies, and funds can be targeted toward those populations with the most need, promoting more efficiency and equity in the system.

The GOQ does not collect measures of child development. Monitoring child development serves several important purposes: it can establish a baseline and gauge the magnitude of a problem, evaluate the impact of existing interventions, and assess the types of ECD interventions that are most effective and cost-effective in a given context, or for a specific population to inform the dialogue for future policymaking. Domains to assess include physical, cognitive, language, and social development. Box 9 provides an overview of Vietnam's School Readiness Promotion Project, which assesses measures of child development to improve its early childhood education system. The project provides a holistic assessment of the cognitive, physical, language, and social developments of a child.

Individual children's development outcomes are not tracked. Given the holistic nature of children's development, it is important for government to design information management systems that are capable of tracking individual children comprehensively, with mechanisms to respond to their needs. Tracking can help identify children experiencing developmental delays, so that they can receive intervention services to address the delays in a timely fashion. Box 9 also presents an example from Macedonia, which tracks individual children's development outcomes to determine primary school readiness, identify developmental delays, and assess teaching strategies.

Vietnam: Using data on child development to improve classroom practice. Under Vietnam's School Readiness Promotion Project for preschool children, teachers at all ECCE centers implement a holistic assessment of all five-year-olds in their schools. The assessment gauges cognitive, physical, language, and social development. The results are aggregated and used to help inform adjustments in curriculum, teacher training, and facilities investment. The goal of the assessment is to ensure that children are ready to begin grade one.

Macedonia: Tracking individual children's development to improve teaching and identify children with developmental delays. As of 2014, every child enrolled in an ECCE center in Macedonia has a child development portfolio. The portfolio contains tools to track the child's development based on the Early Learning and Development Standards framework adopted in Macedonia. These cover the physical, cognitive, language, and social development domains. Checklists and notes in the portfolio document the child's strengths, abilities, and interests. Preschool teachers use this information to adjust the curriculum and teaching. The information conveys the school readiness of each child and is used to smooth the child's transition from preschool to primary school. The tool can help identify children experiencing developmental delays, and teachers may be able to adjust their teaching strategies accordingly. As of 2015, a referral system was not yet in place to refer children with delays to specialist support services, but plans for such a system were under development.

Box 9. Examples of Countries Using Data to Improve their ECD System

Policy Options to Improve Data Availability The GOQ could collect and analyze administrative data related to child protection. This would include the number of orphans and the number of vulnerable children who require support and care. Several offices in the country may collect data on child protection cases, but these figures were not available for review for this report. While the number of children identified may be small, it's still important to monitor their numbers and circumstances. This is related to the recommendation to develop a clear policy on child protection, presented in the legal framework policy goal of this report. Data are crucial for good policymaking, so establishing tracking mechanisms is a key part of any child protection system.

The GOQ could also consider gathering data on child development from representative samples of preprimary children. Currently, the lack of data—and especially data focused on child outcomes rather than inputs—constrains the ability of the ECE system to plan, monitor, and evaluate. Monitoring child development across several domains can be helpful

to assess the status of children and target interventions accordingly, as well as evaluate the impact of interventions. These data are crucial to informed policymaking. There are several child development instruments that can be adapted for use in a variety of contexts that the GOQ could consider (table 9). Effective use of any of these or other instruments would require careful contextualization to be appropriate and valid for Qatar. Once data become available, using data effectively requires a shift in mindset that recognizes and commits to changing classroom practice to improve teaching and learning.

Instrument	Developer/Publisher	Description	Domains
EDI (Early Development Instrument)	McMaster University	EDI is a checklist of approximately 100 items, completed by educators, applicable for children four to seven years old, developed to facilitate population-based assessment.	Health and well-being, language and cognitive skills, and socioemotional development.
IDELA (International Development Learning Assessment)	Save the Children	Direct child assessment that measures early learning and development for children ages 3.5 to six years with an accompanying questionnaire to assess the home learning environment.	Motor skills, early language and literacy, early numeracy/ problem solving, socioemotional development, and approaches to learning
MODEL (Measurement of Development of Early Learning)	Measuring Early Learning Quality and Outcomes Initiative (MELQO) (comprised of World Bank, Brookings Institution, UNICEF, UNESCO)	The purpose is to support the measurement of groups of children, for example at the population level. It can be used for children ages three to seven, and data can be collected using a parent and/or teacher report and a direct assessment instrument.	Socioemotional skills, preacademic skills such as language, preliteracy and prenumeracy, and executive function
Woodcock Johnston/Munoz	Pearson Assessments	This tool is a direct assessment test that measures children and adults ages two years six months to adulthood. The tool is administered by examiners/ enumerators.	Cognitive development

Table 9. Selected Instruments to Assess Early Learning Source: Adapted from Early Learning Partnership, July 2016. "Measuring Child Development and Early Learning" Guidance Note.

The GOQ could also establish mechanisms to track individual children's holistic development. Periodically assessing how individual children are developing on multiple domains can help identify children at risk of experiencing developmental delays. Identification followed by early referral to intervention services is far more effective than allowing developmental problems to continue unaddressed. Box 10 describes a comprehensive, continuous assessment of individual children's development used in the United Kingdom. Box 11 lists the key aspects of a strong early childhood education data collection system.

The Early Years Foundation Stage (EYFS) Profile in the United Kingdom is a standardized assessment that continuously monitors student performance from two–five years of age. The EYFS is overseen by the UK's Department of Education and administered by trained teachers.

Child development is recorded in a comprehensive assessment of their knowledge, understanding, and skills, and readiness for primary school transition. Skills related to communication and language, physical development, personal, social, and emotional development, literacy, mathematics, and expressive arts are all assessed. Information is gathered by trained teachers through observation and information from the child's teachers, parents and caretakers, and educational records. A report is first issued after monitoring children between the ages of two and three. The report provides parents with an overview of their child's strengths and areas for improvement. Special education or disability needs are identified if any significant development concerns are detected. Another report is completed when the child reaches the age of five. The profile is used to inform parents about their child's characteristics, development, and primary school readiness. It also provides benchmarking about a child's readiness in relation to expected levels of development, which are set by the EYFS Statutory Framework.

Source: OECD 2015.

Box 10. Monitoring Child Development: Early Years Foundation Stage Profile, United Kingdom

The Early Childhood Data Collaborative, a research institute in the United States, has outlined the following as "fundamental" for Early Childhood Education and Care (ECEC) data collection:

- A unique statewide or region-wide child identifier, which allows governments to track ECEC participants over time if they change schools or move to another city
- Child-level demographic and program participation information, including family background characteristics
- Child- and group-level data on child development
- The ability to link child-level data with the school and other key data systems
- Unique program site identifiers with the ability to link with children and the ECEC workforce
- Program site data on structure, quality, and the work environment (such as the staff–child ratio)
- A unique ECEC workforce identifier, with the ability to link with program sites and children
- Individual ECEC workforce demographics, including education and professional development information.

Source: OECD 2012b.

Box 11. Fundamentals for ECEC Data Collection, United States

Policy Lever 3.2: Quality Standards (Rating: Established)

Policy Assessment of Quality Standards Ensuring quality ECD service provision is essential. A focus on access—without a commensurate focus on ensuring quality—jeopardizes the benefits that policymakers hope children will gain through ECD interventions. The quality of ECD programs is directly related to better cognitive and social development in children (Taylor and Bennett 2008; Bryce and others 2003; Naudeau and others 2011; Victoria and others 2003).

ECE curriculum in the country has important gaps. There is no curriculum currently implemented in nurseries, which cover children aged zero to four. As for preprimary school, two curricula are in use: the KG-Grade 6 Curriculum Standards and the Foundation Curriculum. The KG Curriculum covers subject area content that children are expected to learn that year in school. For example, for the Arabic language standards, students are expected to be able to read 50 commonly used words (which are listed), to write one's name, to understand sound-letter correspondence, to demonstrate basic reading and listening comprehension skills, and to write all of the letters of the alphabet, among other skills. Schools receive a curriculum overview that outlines when each standard should be introduced and reviewed. The activity books that children use in independent schools are based on these standards. A comprehensive curriculum standards review is currently underway for KG-12 and should be completed in the second half of 2018.

The Foundation Curriculum promotes the education of young children through experiences based on learning through play that are meaningful, useful, and age-appropriate. It includes a list of developmental milestones related to five aspects of child development: physical development (includes motor skills), exploration (includes science and mathematics), identity formation (through Islamic studies and social studies), communication (includes Arabic and English), and creative expression (includes art, music, motion, and theater). The curriculum also includes an accompanying professional development program for teachers, comprised of seven modules each covering an important aspect of early childhood education. Training is mandatory for all government school teachers, and is conducted through and in-service training cascade program. The training modules are:

1. Evaluation
2. Additional needs to support education
3. Play and learning
4. Holistic curriculum in early childhood education
5. Language development in mother tongue and second language
6. Parents as partners
7. Positive reinforcement

At roughly the same time as it introduced curricula and learning standards for early childhood education, the SEC also developed the Early Years Education Good Practice Guide (GPG) as part of the Education for a New Era Initiative. The Good Practice Guide was created for use by schools and teachers to build a modern educational system that nurtures Qatari values. It provides (i) a

framework for evidence-based policy implementation, (ii) professional practice guidelines for implementing the Foundation Curriculum in alignment with the curriculum standards, and (iii) guidance for teachers in public schools on the National Professional Standards. Its three sections are: Research Factors Associated with Early Years Education, Early Years Education Good Practice, and School Policies that Strengthen Good Practice. It contains information on topics such as planning flexible learning experiences, fostering language development and bilingualism, assessing and reporting on children's learning, and building relationships with parents.

The two curricula and the Good Practice guide were all developed according to standards set by the SEC in 2009. They are designed to be integrated, aligned, and complementary to each other. However, teachers are expected to combine all three documents in their classroom approach, which may lead to none of the documents being applied correctly (ETSS2 Report 2011-1016). In addition to this, based on the ETSS2 report, the final year of the preprimary curriculum is not aligned with the first-grade curriculum. Given these factors, the Education Strategy 2017-2022 calls for review and standardization of the ECE curriculum. Without a full review of the curriculum and classroom observations, it is difficult to assess the extent to which the existing curriculum and classroom practice adequately foster the early development of children.

There are educational requirements to becoming an early childhood educator in the public sector, but few opportunities for continuing professional development. In the public sector, early childhood educators must hold a bachelor's degree in early childhood education, primary education, home economics, or a subject area such as Arabic, English, mathematics, science, and so on. Early childhood education assistants must have a high school diploma. No preservice practicum or similar type of training is required before starting a teaching position. Participation in a 30-hour in-service training is mandatory for teachers in the public sector every year. Approximately two dozen types of in-service training courses have been held, but it's not clear over what period of time these trainings have been offered, or if they have targeted teachers throughout the country or only at a limited number of schools. Most of these courses are related to the curriculum standards. Roughly one-third of preprimary teachers have participated in at least one of these trainings. Inspectors in the Early Years Department of the MOEHE provide some of this training. MOEHE also uses private companies to deliver training. As stated in the ETSS2 report, there are not enough professional development opportunities for teachers at the early childhood level.

Educators in the private sector are not required to have training or experience in early childhood education. Standards for public education teachers do not apply to teachers in private schools. The latter are required to hold a bachelor's degree in any subject—it need not be related to early childhood education. Early education teachers in private schools do not need to have previous experience teaching or with young children. The lack of standards likely means that there are many unqualified people working in private centers, which may have a negative effect on the quality of education.

Infrastructure and service delivery standards are established for early childhood education facilities, although some standards may not apply to private schools. In terms of infrastructure, the MOEHE's Safety and Security Policy requires all government preprimary schools to have potable water and hygienic facilities. Service delivery standards have also been established by MOEHE, including child-to-teacher ratios for its programs. For three-year-olds, the ratio is 7:1; for four-year-olds, 10:1; and for five to six-year-olds, it is 12:1. It is not clear whether these ratio requirements are applied to schools not run by the government. The SEC's Education Institute issued the Health and Safety at Independent (government) Schools document. These guidelines are not specific to preprimary programs, and cover development of emergency plans, assessing potential hazards, and provision of first aid. The Evaluation Institute of the SEC developed an evaluation system covering both facilities and learning outcomes. The evaluation system is currently managed by the MOEHE, and details on the system were not available for review for this report.

The "Ensuring Quality and Grading Scale for Evaluating Programs" document is used for preprimary classes and first and second grades of primary schools. The document is essentially a checklist to evaluate implementation of standards in public schools. The checklist covers many important components of a preprimary education, but several practices not currently in place may be necessary for a positive impact on children's educational experiences. Evaluators should have a high level of experience and knowledge to conduct a thorough evaluation. Most importantly, they could provide specific, actionable feedback to schools and teachers to implement in their classrooms, and follow-up on specific items of concern. Weaknesses identified in inspections across schools could be used to tailor in-service professional development programs.

There are twelve sections for the ensuring quality document:

1. Planning for flexible learning experiences to engage all students
2. Using teaching strategies and sources to engage students in active learning
3. Strengthening language development in English and Arabic
4. Preparing a safe, supportive, and stimulating learning environment
5. Planning and implementing learning experiences outside of the classroom
6. Incorporating information and communications technology in learning activities
7. Evaluating children's learning and reporting on it throughout the school year

8. Teachers use children's previous knowledge to plan learning activities

9. Apply foundational approach/curriculum to early childhood and appropriate curriculum standards

10. Teachers work together as members of a professional team

11. Build cooperative relationships with parents to link home with school learning experiences

12. Teachers evaluate and improve their professional skills based on professional development activities

Each item receives a score from 1–4, and evaluators are expected to provide prose descriptions of how the school meets each requirement.

There are infrastructure and safety standards for nurseries, but no standards on the quality of the learning environment. The MADLSA Division of Family Affairs, Nurseries Section has a Nurseries Inspection Form. The form outlines a number of requirements for all nurseries. The sections are:

- Education and spatial environment (includes adequate space per number of children, toilet facilities, refrigerators, windows, and hygiene
- Health, safety and security (exits, fire alarms, safety gates, nursery workers must have medical certificates)
- Curricula and teaching material
- Management and leadership (includes ratio of staff to children
- Qualifications of workers and staff

There is no national curriculum or set of learning standards for nurseries. The Supreme Education Council developed learning standards several years ago, but these were not implemented.

There are established registration and accreditation procedures for ECCE facilities. The MOEHE's engineering office has issued guidelines for obtaining a nursery/school license. In the past, private schools were not required to comply with these guidelines, but now all new school buildings must comply with these requirements. The MOEHE Evaluation Institute has an accreditation department that visits all schools at least once every three years. The Private Schools Department, in turn, visits the private schools.

Policy Options to Improve Quality Standards The GOQ could consider developing a continuous, coherent curriculum that covers ages zero–six. Such an approach could promote the full range of developmental processes that occur in the early childhood years, without any gaps in the system. With this continuous approach, children would be supported to build skill upon skill until they have reached the competencies identified as necessary for success in starting primary school. Given the overwhelming evidence of the importance of play for the development of children in this age group (Whitebread and others 2012), an important characteristic of this curriculum can be its focus on play.[9] Such curriculum would likely reduce inefficiencies in the system, and render the government's investments in ECE more effective. Developing this curriculum could be a shared endeavor for MADLSA and MOEHE, and a starting point for better cross-ministry collaboration. Box 12 provides the example of a curriculum in New Zealand that covers birth through six years of age.

In 1996, New Zealand's Ministry of Education published the Te Whāriki, an early childhood curriculum for children from birth to six years. In 2017, an updated version was launched. All licensed providers of early childhood education are required to implement the curriculum.

The Te Whāriki is underpinned by four principle expectations of all early childhood education provisions; Empowerment, Holistic Development, Family and Community and Relationships. The thinking behind the curriculum is that every child should 'learn to learn', be a confident communicator, be healthy and happy, and know they belong, and are valued.

There are five strands or areas of learning and development; wellbeing, belonging, contribution, communication, and exploration. Within each strand, goals are articulated for the early years' practitioner or care provider, describing characteristics of the learning environment and pedagogies consistent with the principles. Learning outcomes are also identified, framed in the context of a continuum, and are designed to inform planning and evaluation and support the assessment of children's progress. Examples are provided to ensure parents and educators understand what the child's learning looks like in practice.

The Te Whāriki emphasizes the role of parents, caregivers, and the community in the early development of the child from birth. It also promotes and supports partnerships between home and early education provisions.

Source: https://education.govt.nz/early-childhood/teaching-and-learning/ece-curriculum/

Box 12. Early Years Curriculum: Te Whāriki New Zealand

9 A play-based curriculum can also be complemented with physical environment standards that support the full range of play experiences, including physical play, exploration, constructional play with objects, and symbolic play (Whitebread et al. 2015).

The GOQ could extend pre-service training requirements to teachers working in private schools. Qatar has established several types of quality standards through national qualifications frameworks and labor laws related to early childhood education, but these should be revised or expanded to ensure quality. Several recommendations relate to workforce development. Without a qualified early childhood workforce, the quality of the country's ECE system will be limited, regardless of other investments the government makes in preprimary education. Currently, teachers working in public preprimary schools must hold bachelor's degrees in a subject area deemed relevant to their positions. Teachers in private schools need only be eligible to work in Qatar and may hold a bachelor's degree in any subject. Many of these teachers likely have no expertise or experience working with young children in a play-based curriculum. This may have a negative impact on education quality.

Additionally, the GOQ could provide early childhood educators in both the public and private sectors with more preservice and in-service training opportunities. The GOQ should consider making such training mandatory, and ensuring that teachers receive continuous professional development. Teachers should also be encouraged to cultivate strong relationships with parents. Settings with highly qualified teachers yield better cognitive and social outcomes for children (Neuman and Devercelli 2013). It is particularly important to ensure that teachers are committed and know how to implement a child-centered, play-based, holistic approach, because in many cases this is not the approach that they themselves experienced in their education.

The GOQ could benchmark the quality of ECD providers with international early childhood environment rating scale (ECERS) standards. Benchmarking with international standards would enable the country to gauge its performance on different dimensions of ECD quality standards and identify areas for improvement.

Policy Lever 3.3: Compliance with Standards (Rating: Established)

Policy Assessment of Compliance with Standards Establishing standards is essential to providing quality ECD services and to promoting the healthy development of children. Once standards have been established, it's critical that mechanisms are put in place to ensure compliance with standards.

There are mechanisms in place to gauge compliance with infrastructure and service delivery standards. As mentioned in the previous section, the MADLSA has the nurseries inspection form and the MOEHE has the ensuring quality and grading scale for evaluating programs document. The documents are used by evaluators to ensure schools comply with standards, and schools that fail to comply can incur various financial penalties. In some cases, they may lose their license and be forced to close. The MADLSA is responsible for notifying the nursery if it fails to comply with Law No. 1, 2014, on regulating nurseries within a certain time. A warning letter will follow, and finally a deduction from the nursery's bank guarantee will be made. MADLSA plans to

implement a star-rating system for nurseries. For private preprimary programs, the MOEHE takes the outcome of school inspection into consideration when they review schools' applications to increase fees. Yet, it's not clear whether ECD providers are complying with standards related to teachers. For example, the number of preprimary teachers who meet the minimum educational requirements for their positions is not known.

Policy Options to Improve Compliance with Standards The GOQ could track the number of teachers who comply with preservice training requirements. The government has several mechanisms to monitor for compliance with standards, but there are several areas where it could make improvements. It's important to know what the level of compliance is with existing standards. If standards cannot be enforced, then their value is greatly diminished.

The GOQ could also invest in its capacity to monitor service delivery quality in nurseries and preprimary schools. It takes a level of expertise and experience to be able to monitor service delivery quality in early childhood centers, and this capacity may not be found in sufficient numbers of staff in MADLSA and MOEHE. For example, it may be easy to do a cursory inspection for the existence of certain types of equipment, but it is more difficult to evaluate the quality of interactions of caregivers with young children. If quality deficiencies are identified, then clear guidance should be offered to help centers improve, as improvements of this nature are not as straightforward as infrastructure enhancements.

Benchmarking and International Comparison of ECD Policies in Qatar

Qatar's ECD system is considered 'emerging' on establishing an enabling environment, and 'established' on both Implementing Widely and Monitoring and Assuring Quality. Table 10 presents the classification of ECD policy in Qatar within each of the nine policy levers and three policy goals. The SABER–ECD classification system does not rank countries according to any overall scoring; rather, it intends to share information on how different ECD systems address the same policy challenges. In addition, the frameworks for the finance, coverage, and equity policy levers were revised to reflect the unique situation in Qatar, so they are not directly comparable to the other countries presented.[10]

Benchmarks for Qatar's ECD system are generally not as advanced as those for several OECD countries. Table 11 presents the status of ECD policy development in Qatar, alongside a selection of other countries. One comparator country is Australia, an OECD country with a relatively 'established' ECD system. Turkey has also been included as an OECD country that scores as "Emerging" in most policy levers. Chile, a third OECD country, is included given its strong multisectoral ECD policy (described in box 6). Jamaica is included because of its success in developing strong institutional structures to support ECD, and its high scores, although it is not a high-income country (aspects of Jamaica's ECD system are described in box 6). Sweden is home to one of the world's most comprehensive and developed ECD policies and achieves a benchmarking of 'advanced' in all nine policy levers. Finally, Tunisia is included as a comparator country from the Middle East and North Africa region.

10 For example, health extension workers are a common component of many countries' health systems, but do not exist in Qatar. Similarly, community-based childcare services, an ECEC modality used in many countries, are not found in Qatar. Several items gauge access to basic health and nutrition services for health conditions which do not typically exist in Qatar, or for which service delivery is so routine that data are not gathered on them. A small sample size due to the small population of the country meant that the immunization indicator was not valid. MICS data for Qatar do not allow for analysis by poorest/wealthiest quintile and rural/urban area, which precluded inclusion of several items. Data are not available on enrollment rates by subnational regions. Specifically, in the Finance Policy Lever, the following items were omitted from the analysis: "Are community-based childcare professionals paid by the government?" and "Are extension health service professionals paid by the government?" In the Coverage Policy Lever, these items were omitted: "What percentage of HIV+ pregnant women and HIV-exposed infants receive ARVs for PMTCT?"; "What percentage of one-year-old children is immunized against DPT?"; "What percentage of children below five years of age with suspected pneumonia receives antibiotics?"; "What percentage of children less than five years of age (in at-risk areas) sleeps under an ITN?"; "What is the Vitamin A supplementation coverage rate for children 6 to 59 months of age?"; "What percentage of the population consumes iodized salt?" and "What is birth registration rate? (children below five years)?" In the Equity Policy Lever, these items were excluded: "What is the ratio of preprimary enrollment at the subnational level for the regions with the highest and lowest enrollment?"; "What is the ratio of birth registration comparing richest to poorest?"; "What is the ratio of skilled attendants at birth comparing richest to poorest?"; "What is the underweight prevalence in children comparing richest to poorest?"; "What is the ratio of birth registration for urban regions to rural regions?"; and "What is the ratio of urban to rural access to improved sanitation facilities?".

ECD Policy Goal	Level of Development	Policy Lever	Level of Development
Establishing an Enabling Environment	●●○○	Legal Framework	●●○○
		Intersectoral Coordination	●○○○
		Finance	●●●○
Implementing Widely	●●●○	Scope of Programs	●●●○
		Coverage	●●●○
		Equity	●●●○
Monitoring and Assuring Quality	●●○○	Data Availability	●●○○
		Quality Standards	●●●○
		Compliance with Standards	●●●○

LEGEND	LATENT	EMERGING	ESTABLISHED	ADVANCED
	●○○○	●●○○	●●●○	●●●●

Table 10. Benchmarking Early Childhood Development Policy in Qatar

ECD Policy Goal	Policy Lever	Level of Development						
		Qatar	Australia	Chile	Jamaica	Sweden	Tunisia	Turkey
Establishing an Enabling Environment	Legal Framework	●●○○	●●●●	●●●○	●●●○	●●●●	●●○○	●●●○
	Coordination	●○○○	●●●●	●●●○	●●●○	●●●●	●○○○	●●○○
	Finance	●●●○	●●●●	●●●○	●●○○	●●●●	●●○○	●●○○
Implementing Widely	Scope of Programs	●●●○	●●●○	●●●●	●●●○	●●●●	●●○○	●●●○
	Coverage	●●●○	●●●●	●●●○	●●●○	●●●●	●●●○	●●○○
	Equity	●●●○	●●●○	●●○○	●●●○	●●●●	●●○○	●●○○
Monitoring and Assuring Quality	Data Availability	●●○○	●●●○	●●●○	●●●●	●●●●	●●○○	●●○○
	Quality Standards	●●●○	●●●○	●●○○	●●●○	●●●●	●●●○	●●●○
	Compliance with Standards	●●●○	●●●○	●●○○	●●○○	●●●●	●●○○	●●○○

LEGEND	LATENT	EMERGING	ESTABLISHED	ADVANCED
	●○○○	●●○○	●●●○	●●●●

Table 11. International Classification and Comparison of ECD Systems

Chapter 4

Conclusions and Policy Recommendations

Qatar fares well on some child developmental domains, though below expectation given its high level of economic development. The country performs well in early motor and executive functioning skills. Yet performance in other developmental domains is below expectation, given Qatar's high level of economic development. There are important challenges in the physical development of children, with more than a quarter of children under five being overweight or obese. Gaps in self-regulation skills also persist, with a third of children being unable to attend to and focus on simple tasks without being distracted easily. Early literacy and numeracy skills are not being developed by many young children in Qatar, and though two-thirds of children ages three and four perform particularly well with letter recognition, many are not able to read simple, popular words. Moreover, 30 percent of children in this age group cannot name and recognize symbols for all numbers between one and ten.

Addressing these early gaps is key for shaping not only the life course of Qatar's young children, but also the trajectory of the country's development. Improved early childhood development in the country has the potential of enhancing children's academic performance in primary and secondary school. For example, this study finds that students who attended preprimary education perform significantly better than their peers at age 15 in all PISA subjects (mathematics, reading, and science), after accounting for school, teacher, and family characteristics. Improved early development can also lead to better health outcomes and higher earnings later in life. (Karoly 2016; Phillips and others 2016; Gertler and others 2014; Dickens and others 2006). Moreover, benefits are likely to extend beyond the individual to the economy and society, potentially improving economic outcomes and even reducing crime rates (Sala-i-Martin, Doppelhofer, and Miller 2004; Walker 2011).

Realizing this potential requires Qatar to invest in three key areas: strengthening the policy environment for ECD, improving the coverage and scope of programs, and establishing a comprehensive quality assurance system for continuous quality improvement of ECD services. This section distills the main recommendations for each of these areas, and outlines a preliminary timeframe for their implementation.

A stronger policy environment is needed to design and implement effective ECD policies in Qatar, with the top priority to develop a cohesive ECD strategy and a coordination mechanism across ministries and key stakeholders. The development of a comprehensive ECD strategy that clearly articulates the government's objectives and goals for ECD, as well as the establishment of a multisectoral body that can design, coordinate, and implement it, should be short-term priorities for Qatar. With these two initial steps taken, important policy actions should follow, including the development of a comprehensive child protection policy, and the expansion of breastfeeding and parental leave policies. Adopting mechanisms for budget coordination across ministries and tracking ECD expenditures in the medium term will, in turn, contribute to increase financing efficiency in ECD. Implemented together, these recommendations (further outlined in table 12) can strengthen the enabling environment for ECD in Qatar.

Policy Recommendation	Rationale	In Collaboration With	Time Frame
Strengthening the Enabling Environment			
Legal Framework			
Expand programs to promote breastfeeding • Awareness in health facilities • Adopt International Code of Marketing and Breast milk Substitutes provisions • Mandate breastfeeding facilities in work and public facilities	Creating awareness of and facilitating breastfeeding increases breastfeeding, which improves child health	MOPH	Medium
Extend maternity leave; establish paternity leave in the private sector	Increased parent-child interaction improves child health and development; enables parent-child bonding	MADLSA	Medium
Develop clear, comprehensive child protection policy • At-risk children identification and monitoring system • Housing system • Emergency outreach system	Child protection policies and programs protect vulnerable children	MADLSA	Medium
Establish cross-sectoral service support system for special needs children	A cross-sectoral support system facilitates service access for special needs children	MOEHE, MOPH, & MADLSA	Medium
Intersectoral Coordination			
Establish institutional anchor	Improved ECD coordination ensures coherence of programs and services, which increases system efficiency and reduces gaps in service provision	MADLSA, MOEHE & MOPH	Short
Develop multisectoral ECD plan, encompassing education, health, nutrition, and child and social protection sectors. Alternatively, develop well-coordinated individual sector strategies	Comprehensive policy planning reduces gaps in coverages and promotes children's holistic development	MOEHE, MOPH, MADLSA	Short
Finance			
Adopt mechanism for cross-ministerial budget coordination	Reducing overlap of funding and funding gaps increases efficiency of ECD spending	MOF, MOEHE, MADLSA, MOH, MOF	Short/Medium
Design system for tracking and identification of ECD spending	Transparency of ECD spending allows for better informed budgeting	MOF, MOEHE, MOPH, MADLSA	Short/Medium

Table 12. Matrix of Policy Recommendations for Strengthening the Enabling Environment

ECD programs should be broad in their scope and implemented widely, reaching all children in Qatar. In the short – to medium-terms, the coverage of nutrition programs and preprimary education should be significantly increased. Efforts to increase coverage should include an expanded supply of programs, but also key demand-side interventions. Public demand for early childhood development programs will need to be cultivated if coverage is to grow. Efforts should also consider inequalities in coverage, and be designed to minimize these inequalities. The scope of ECD programs provided can also be expanded in the medium-term to include parenting and caregiver programs. Implemented together, these initiatives can enhance the program coverage, scope, and equity of ECD policies and programs in Qatar. The recommendations are detailed in table 13.

Policy Recommendation	Rationale	In Collaboration With	Time Frame
Enhancing Program Coverage, Scope and Equity			
Scope of Programs			
Expand parenting and caregiver programs	Providing developmentally appropriate, positive interactions between parents and their children can improve developmental outcomes and improve parent-child relationships	MOEHE, MADLSA	Short/Medium
Coverage			
Increase preprimary enrollment • Supply-side: Increase public and/or private provision of preprimary education programs	Increased supply of preprimary education may help improve enrolment if overcrowding and/or geographic distance are barriers	MOEHE, private sector providers	Short/Medium
• Demand-side: Design and launch national awareness campaign on preprimary education	Informing parents about the importance of preprimary education can increase enrolment, while also improve parental engagement at home	MOEHE, MADLSA, community partners, schools	Short/Medium
Increase coverage of nutrition programs • Increase public awareness • Integrate healthy habits into preprimary curriculum	Increased coverage of nutrition programs can reduce the high anemia and obesity rates prevalent among Qatari pregnant women and children, respectively	MOPH, MOEHE	Short/Medium
Equity			
Investigate potential causes of disparities in access to prenatal health services between Qatari and non-Qatari women	Identifying the reason for disparity can inform policies for increasing access to health services for non-Qatari women	MOPH	Short

Table 13. Matrix of Policy Recommendations for Enhancing Program Coverage, Scope, and Equity

Establishing a strong ECD quality assurance system in Qatar is essential for guaranteeing that ECD programs are yielding the expected results. While Qatar has already developed most of the elements of a quality assurance system, in the short-to-medium terms, the country should fully articulate and align these various elements into a coherent system. On the one hand, Qatar should harmonize quality standards for all public and private teachers and providers, and develop a coherent curriculum covering ages zero to six. A parallel effort should also be undertaken to implement monitoring and incentive mechanisms to ensure compliance with established quality standards. To establish a baseline from which to monitor progress, Qatar could choose a data collection instrument that measures child development outcomes and link them to the quality of service delivery, and implement it among a sample of preprimary students. These data will be invaluable as the country moves forward in strengthening its ECD system. Key recommendations to improving the ECD quality assurance system are outlined in table 14.

Policy Recommendation	Rationale	In Collaboration With	Time Frame
Improving ECD Monitoring and Quality Assurance			
Data Availability			
Collect administrative child protection data	Data collection would allow GOQ to identify children in need of support and provide targeted support for them	MADLSA, MOEHE, MOH, MDPS	Short
Collect child development data from representative samples of preprimary children	Collecting developmental data samples would allow GoQ to assess the status of children and to better plan, monitor, and evaluate interventions accordingly	MOEHE	Short/Medium
Quality Standards			
Extend pre-service training requirements to private school teachers	Harmonizing quality standards across all preprimary education providers will increase consistency across service provision	MOEHE	Short/Medium
Increase opportunities for preservice and in-service training for all teachers	Increasing training opportunities will minimizes barriers to training, which can potentially improve teacher knowledge/skills	MOEHE	Short/Medium
Develop coherent curriculum covering ages 0-6	A continuous curriculum that promotes the full range of developmental process from nursery to kindergarten, will fill any gaps in the system and ease transition between nursery, kindergarten and primary education, while also helping to standardize quality across service providers.	MOEHE, MADLSA	Medium
Benchmark the quality of ECD providers with international Early Childhood Environment Rating Scale (ECERS) standards.	Benchmarking would allow assessment of ECD quality standards and identify areas for improvement	MOEHE, MADLSA	Medium
Compliance with Standards			
Track the number of teachers who comply with pre-service training requirements	Tracking non-compliance, allows to target training programs and devise incentive systems to promote compliance.	MOEHE	Short
Monitor quality of service in nurseries and preprimary schools	Monitoring quality allows and can incentivize progress of providers along a quality continuum. The public release of this information can also allow for parental choice, potentially introducing incentives for improved quality among providers.	MOEHE, MADLSA	Short/Medium

Table 14. Matrix of Policy Recommendations for Improving ECD Monitoring and Quality Assurance

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world innovation summit for education
مؤتمر القمة العالمي للابتكار في التعليم

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Disclaimer

The views and opinions in this publication are solely those of the author. Errors and omissions remain the responsibility of the author.

Annexes

Variables	Mean	SD	Range
Dependent Variables			
ECD – All Domains	6.7874	1.7104	2 – 9
Motor Skills	0.9575	0.2019	0 – 1
Executive Function	2.3446	0.7965	0 – 3
Follow simple directions	0.9120	0.2835	0 – 1
Perform task independently	0.7874	0.4095	0 – 1
Do not get distracted easily	0.6452	0.4788	0 – 1
Socio-Emotional	1.6979	0.4993	0 – 2
No kicking biting or hitting	0.7419	0.4379	0 – 1
Get along with other children	0.9560	0.2052	0 – 1
Literacy – Numeracy	1.7874	1.1687	0 – 3
Name at least 10 letters	0.6833	0.4655	0 – 1
Read at least 4 words	0.4164	0.4933	0 – 1
Name and recognize 10 numbers	0.6877	0.4638	0 – 1
Independent Variables			
Early childhood education			
Attendance to organized learning	0.4076	0.4918	0 – 1
Early stimulation at home	8.5191	2.4728	1 – 12
Interactions with mother	4.8900	1.4301	0 – 6
Interactions with others	3.6290	1.827	0 – 6
Child ever breastfed	0.9135	0.2813	0 – 1
Child's gender (Female=1)	0.4707	0.4995	0 – 1
Child's age	3.4824	0.5001	3 – 4
Mother's education	3.4091	0.8262	1 – 4
Number of children's books at home	5.2991	3.8399	0 – 10

Table A1. Descriptive Statistics of Study Sample for Analysis of Early Development Outcomes Source: MICS 2012.

	ECD – All Domains	Motor Skills	Executive Function	Socio – Emotional	Literacy – Numeracy
Attendance to preprimary education (ages three and four)	0.851***	0.0149	0.125*	0.0762*	0.635***
	(0.130)	(0.0155)	(0.0641)	(0.0427)	(0.0891)
Family-based interventions (Interactions with adultswithin the last 7 days)	0.0602**	-0.00308	0.0180	-0.0321***	0.0775***
	(0.0257)	(0.00313)	(0.0137)	(0.00794)	(0.0181)
Child ever breastfed	0.272	0.0946*	0.0153	0.225***	-0.0628
	(0.239)	(0.0490)	(0.110)	(0.0832)	(0.135)
Child's gender (Female=1)	-0.0134	-0.0112	-0.0304	0.0328	-0.00467
	(0.117)	(0.0158)	(0.0607)	(0.0379)	(0.0771)
Child's age	0.660***	0.0180	0.163***	-0.0242	0.504***
	(0.122)	(0.0155)	(0.0620)	(0.0393)	(0.0815)
Mother's education	0.0555	0.00194	-0.0118	0.0254	0.0400
	(0.0775)	(0.00899)	(0.0411)	(0.0229)	(0.0506)
Number of children's books at home	0.0726***	0.00717***	0.000224	0.0193***	0.0459***
	(0.0169)	(0.00224)	(0.00869)	(0.00542)	(0.0112)
Intercept	2.811***	0.789***	1.613***	1.615***	-1.205***
	(0.567)	(0.0683)	(0.285)	(0.184)	(0.367)
Observations	682	682	682	682	682
Adjusted R-squared	0.195	0.033	0.016	0.050	0.256

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2. Multivariate Regression Analyses on Early Development Outcomes[11]

11 Coefficients of interest are presented in the first row. The adjusted R-squared, the proportion of variance explained by the composite index adjusted for the number of predictors, is roughly 20 percent. This is well within the range for cross-sectional analysis in this strand of the literature.

	ECD – All Domains	Motor Skills	Executive Function	Socio – Emotional	Literacy – Numeracy
Early childhood education					
Attendance to preprimary education (ages three and four)	0.50***	0.07	0.16*	0.15*	0.54***
Family-based interventions (Interactions with adults within the last 7 days)	0.04**	-0.02	0.02	-0.06***	0.07***

*** p<0.01, ** p<0.05, * p<0.1

Table A3. Coefficients of Interest Expressed in Standard Deviations

Variables	Mean	SD	Range
Dependent Variables			
Science	417.6111	98.7363	110 – 783
Mathematics	402.4006	98.7921	78 – 765
Reading	401.8873	110.6324	33 – 771
Independent Variables			
Attendance to preprimary education (ISCED 0) (age 3-5)	0.7004	0.4581	0 – 1
Gender (Female=1)	0.4881	0.4999	0 – 1
Grade	9.9318	0.7642	7 – 12
PISA index of economic, social and cultural status (ESCS)	0.5789	0.7747	-4 – 3
Parental support	3.4840	0.7484	1 – 4
(Parents support students' educational efforts and achievements (Strongly disagree=1, Disagree=2, Agree=3, Strongly agree=4))			
School type (Private=1)	0.4411	0.4965	0 – 1
Number of teachers at school who have a Bachelor's degree	83.5603	51.1694	4 – 245
Student-computer ratio	3.2700	3.8211	0 – 29

Table A4. Descriptive Statistics of Study Sample for PISA Analysis Source: Based on data from PISA 2015.

	Science			Mathematics			Reading		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Attendance to preprimary education (age 3-5)	29.964*** (2.22)	23.462*** (2.28)	9.147*** (2.15)	34.298*** (2.70)	27.820*** (2.70)	11.231*** (2.61)	32.988*** (2.73)	25.621*** (2.82)	8.855*** (2.80)
Gender (Female=1)	17.732*** (1.77)	15.745*** (1.78)	20.723** (1.80)*	4.858* (2.78)	2.8 (2.71)	6.605** (2.85)	46.603*** (1.97)	44.039*** (1.95)	50.048*** (2.06)
Grade	40.465*** (1.26)	35.307*** (1.24)	29.340*** (1.28)	40.765*** (1.55)	35.669*** (1.61)	28.636*** (1.59)	44.979*** (1.56)	39.034*** (1.54)	32.227*** (1.64)
PISA index of economic, social and cultural status (ESCS)		13.516*** (1.48)	11.647*** (1.48)		13.703*** (1.61)	11.028*** (1.55)		14.696*** (1.95)	12.147*** (1.94)
Parents support students' educational efforts and achievements (Strongly disagree=1)		19.325*** (1.20)	14.150*** (1.14)		19.981*** (1.51)	14.370*** (1.48)		23.152*** (1.42)	17.137*** (1.37)
School type (Private=1)			58.206*** (2.02)			65.478*** (2.56)			72.492*** (2.39)
Number of teachers at school with Bachelor's degree			0.159*** (0.02)			0.209*** (0.02)			0.145*** (0.02)
Student-computer ratio			-0.125 (0.22)			-0.074 (0.30)			-0.19 (0.30)
Intercept	-10.980 (12.08)	-28.061** (12.70)	18.89 (12.73)	-25.679* (15.09)	-45.940*** (16.43)	7.22 (16.43)	-87.346*** (14.88)	-109.398*** (14.71)	-54.679*** (15.28)
Observations	9511	9342	8830	9511	9342	8830	9511	9342	8830
Adjusted R_squared	0.14	0.17	0.28	0.14	0.17	0.32	0.18	0.21	0.34

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A5. Multivariate Regression for PISA Analysis[12]

12 Coefficients of interest are presented in the first row. Control variables are added gradually in Models 1-3 as robustness check. The adjusted R-squared, the proportion of variance explained by Model 3 adjusted for the number of predictors, is roughly 30 percent. This is well within the range for cross-sectional analysis in this strand of the literature.

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