

MAINSTREAMING EARLY CHILDHOOD EDUCATION INTO EDUCATION SECTOR PLANNING

COURSE READER FOR **MODULE 3:**
Mainstreaming pre-primary
into an education sector analysis

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Module 3

Welcome to Module 3.

The education sector analysis (ESA) is a critical examination of the status, functioning and results of an education system. It is designed to identify the strengths, weaknesses and opportunities for improvement of the system. As such, the diagnosis describes the present situation and the recent evolution of the education system in a country.

Any strategic planning process should start with a comprehensive and robust analysis of its education sector since the education sector plan (ESP) builds on the findings of the ESA. Thus, to plan for pre-primary, it is critical that the ESA takes into account the key dimensions of this subsector. As with other subsectors, the analysis should cover issues such as the enabling environment, access, quality, efficiency, management and equity. In addition, it should emphasize the specific aspects important for pre-primary, such as the respective roles of public and nonpublic provision, the comparative advantages of different delivery models, the coordination structures, the critical role of the family and the community, play-based curriculum-related aspects and the transition to primary, to name a few.

Module 3 introduces participants to the first phase in the ESP process, the education sector analysis. It looks at the major aspects and processes for developing and conducting an ESA with particular reference to pre-primary provision.

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Intended learning outcomes

Upon successful completion of this module, participants should be able to do the following:

- Explain the basic purpose of an ESA and why it is necessary for the pre-primary subsector.
- Explain the challenges and practical considerations when analyzing the pre-primary subsector.
- Identify the process for developing an ESA.
- Identify the major areas of analysis for pre-primary that should be in an ESA and how they can be analyzed.



Time frame

Module 3 will be held November 11–17, 2019.

The study time needed to complete this module is on average two to five hours depending on your learning profile (i.e. reading/watching the materials, and completing the quiz and activities).



Suggested readings

These key references provide an introduction to the ESA phase of the strategic planning process and the related tools for analyzing ECE in an ESA. **They complement this course reader. Please note that the contents of the suggested readings will not be assessed during the course.**

GPE (Global Partnership for Education), UNESCO (United Nations Educational, Scientific and Cultural Organization), UNICEF (United Nations Children’s Fund), and World Bank. 2014a. *Education Sector Analysis Methodological Guidelines*. Vol. 1. Paris: IIEP-UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000230532>.

———. 2014b. “Early Childhood Development.” Chap. 7 in *Education Sector Analysis Methodological Guidelines*. Vol. 2. Paris: IIEP-UNESCO. <http://unesdoc.unesco.org/images/0023/002305/230533e.pdf>.

UNICEF. 2019. *Pre-primary Sub-sector Diagnostic and Planning Tool*. New York: UNICEF.

These suggested readings can also be found in the bibliography, which lists all of the sources cited in this reader. These documents and the further readings recommended below are available by clicking on the link.



Further readings

Depending on your interests, you may want to consider these other readings.

GPE, and International Institute for Educational Planning–United Nations Educational, Scientific and Cultural Organization (IIEP-UNESCO). 2015. *Guidelines for Education Sector Plan Appraisal*. Paris: IIEP-UNESCO. <https://www.globalpartnership.org/content/guidelines-education-sector-plan-appraisal>. Specifically, p. 10 on evidence-based sector analysis and section 1 on leadership and participation.

GPE, UNESCO, UNICEF, and World Bank. Forthcoming. *Education System Analysis Methodological Guidelines*. Vol. 3. Paris: IIEP-UNESCO.

International Institute for Educational Planning–United Nations Educational, Scientific and Cultural Organization (IIEP-UNESCO), and UNESCO Institute for Statistics. 2016. *Methodology of National Education Accounts*. Paris: IIEP-UNESCO. <http://uis.unesco.org/sites/default/files/documents/methodology-of-national-education-accounts-2016-en.pdf>.

Kitamura, K. 2019. “Global Movement for Assessments of Early Childhood Development and What’s Missing in SDG4.2.” NORRAG Highlights. <https://www.norrag.org/global-movement-for-assessments-of-early-childhood-development-and-whats-missing-in-sdg4-2-by-kenji-kitamura/>.

Liberia, Ministry of Education. 2016. *Liberia Education Sector Analysis*. https://drive.google.com/file/d/0Bw00_oC-cHPvSHVZMHRHVktNjg/view.

Oseni, G., F. Huebler, K. McGee, A. Amankwah, E. Legault, and A. Rakotonarivo. 2018. *Measuring Household Expenditure on Education: A Guidebook for Designing Household Survey Questionnaires*. Washington, DC: World Bank. <http://uis.unesco.org/sites/default/files/documents/measuring-household-expenditure-education-2018-en.pdf>.

Pôle de Dakar-IIEP. 2013. *Household Education Spending, Approach and Estimation Techniques Using Household Surveys*. Dakar: IIEP-Pôle de Dakar. <https://unesdoc.unesco.org/ark:/48223/pf0000226463>.

SEAMEO and UNESCO. 2016. *Southeast Asian Guidelines for Early Childhood Teacher Development and Management*. SEAMEO Secretariat and UNESCO Bangkok Office. <https://bangkok.unesco.org/content/southeast-asian-guidelines-early-childhood-teacher-development-and-management>.

UNESCO. 2010. *Methodological Guide for the Analysis of Teacher Issues. Teacher Training Initiative for Sub-Saharan Africa (TTISSA). Teacher Policy Development Guide*. Dakar: IIEP-Pôle de Dakar. https://poledakar.iiep.unesco.org/sites/default/files/fields/publication_files/methodological_guide_for_the_analysis_of_teacher_issues_-_2010.pdf.

UNICEF. 2018. "Diagnostic and Planning Workshop on Early Childhood Care and Development (ECCD) in Bhutan." Workshop Report. October 30–November 2, Bhutan.

World Bank. 2013. "What Matters Most for Early Childhood Development: A Framework Paper." SABER Working Paper Series 5, World Bank, Washington, DC. http://wbfiles.worldbank.org/documents/hdn/ed/saber/supporting_doc/Background/ECD/Framework_SABER-ECD.pdf.

———. 2017. *Pre-Primary Education in Mongolia: Access, Quality of Service Delivery, and Child Development Outcomes*. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/26402?locale-attribute=fr>.



Virtual platform

On the course platform, you will find the following resources to help you through :

- ▶ Introductory video to Module 3
- ▶ Inspirational video
- ▶ Animated presentation
- ▶ Course reader (this document)
- ▶ Assessment tools (quiz)
- ▶ Activities
- ▶ Poll questions
- ▶ Connect forum
- ▶ Glossary
- ▶ Wrap-up session



Need help?

If you have questions or comments on the readings or activities in Module 3, do not hesitate to share them on the discussion forum (on the course platform) for feedback from other participants and the teaching team. We invite participants to help one another on this forum. The course facilitators will follow these exchanges and intervene when necessary.



AUSTRALIA



1.

WHAT IS AN ESA AND WHY UNDERTAKE IT?

The education sector analysis phase is the first stage of the sector planning process.¹ It is an **evidence-based** examination (usually based on existing data) of the **entire education system**, from pre-primary to higher education, including technical and vocational education and training (TVET) and nonformal education.

It relies on numerous statistical comparisons (a) over time; (b) within a given country (for example, geographical areas, socioeconomic groups, ethnic groups and more), which allows one to analyse the variability of the situation existing in a country; and (c) with other countries, which allows one to assess the position of the country vis-à-vis its neighbours or countries facing similar socioeconomic situations.

The content and quality of the education sector plan (ESP) depends very much on the coverage and depth of the ESA. The ESA focuses on efficiency, looking at how the system transforms its education inputs into outcomes in relation to schooling coverage, quality, equity and external efficiency. Therefore, the analysis helps identify weaknesses and strengths as well as pockets of inefficiencies and their possible causes, offering in-depth comprehension of the realities and challenges facing the education system. This guides the reflection on future priorities for the education sector.

The ESA also provides the baseline data for both the financial simulation model and the monitoring and evaluation (M&E) framework, key elements of an ESP, which will be discussed in Modules 4 and 5. The analysis also flags where important data/information is lacking that is needed to efficiently assess the sector, including the pre-primary subsector. If practical, these data may be collected as part of the ESA process, but more likely, a plan for collecting the missing information can be included within the ESP to enable a more thorough analysis in the future.

¹ The ESA is also known as an education sector diagnosis (ESD) or a country status report (CSR).

The ESA serves as more than an analytical and technical tool. It constitutes a strong **communication and dialogue tool** for consensus building on the situation of the education system, which allows decision makers to come up with a shared vision of the system's characteristics and challenges between the various actors (a) at the country level (ministries in charge of the sector and ministry of economy and finance, teachers unions, parent-teacher associations and more); and (b) with technical and financial partners.

Since the ESP builds on the findings of the ESA, it is critical that the ESA provides a comprehensive examination of the pre-primary subsector and takes into account the key dimensions of this subsector, such as the respective roles of public and nonpublic provision, the comparative advantages of different delivery models, the coordination structures, the critical role of the family and the community, play-based curriculum-related aspects and the transition to primary.

Various tools can be mobilized to develop a comprehensive pre-primary education sector analysis:

- *Education System Analysis Methodological Guidelines*, volumes 1 and 2 (the latter has a dedicated chapter on early childhood development/pre-primary education)²
- *UNICEF Conceptual Framework for the Pre-Primary Sector*
- *UNICEF Pre-primary Sub-sector Diagnostic and Planning Tool* (based on the *Conceptual Framework*)
- IIEP courses on education sector diagnosis (ESD)
- World Bank Systems Approach for Better Education Results (SABER) early childhood development framework

The UNICEF *Conceptual Framework* presented in Module 2 and its companion *Pre-primary Sub-sector Diagnostic and Planning Tool* offer a great entry point to consider what a good pre-primary subsector should look like, and what major aspects should be analyzed and included in the ESA. The *ESA Methodological Guidelines* in general and the early childhood development (ECD) chapter in particular provide overall guidance on what to look at when conducting an ESA and their technical advice on how to address and analyze issues is especially useful. They also follow the "regular" ESA approach, allowing for more consistency when used in a sector-wide diagnosis. The various tools complement one another and can be used together when developing a sector analysis.

2 These guidelines provide methods for carrying out a comprehensive analysis of the education sector in developing countries. Volume 1 discusses the context for the development of the education sector, enrollment, internal efficiency, out-of-school children, cost and financing, quality, system capacity and management, external efficiency and equity. A forthcoming third volume will deal with inclusive education for children with disabilities, risk and conflict analysis, analysis of the functioning and effectiveness of the educational administration, and managing stakeholders and building support for education system reforms.

The following sections will consider in more detail the practical considerations, guiding questions and potential data sources when conducting an ESA with a focus on pre-primary, incorporating guidance from the *ESA Methodological Guidelines*, the *Conceptual Framework* and related methodological documents. However, this module is an overview and does not provide all the technical details, such as how to compute various indicators. The main emphasis is on how to include a pre-primary analysis into the overall ESA process. Those who wish additional information should refer to the Further Readings list.



General Description
Set of Winter Clothing for Child
Set contains:
1- Unisex thermal hat, the hat and
2- Unisex white jacket
3- Unisex warm blanket
4- Unisex warm winter puffer blanket
5- Unisex hat, mittens and scarf set
6- Unisex socks, pair
7- Unisex socks, pair

General Description
Set of Winter Clothing for Child
Set contains:
1- Unisex thermal hat, the hat and
2- Unisex white jacket
3- Unisex warm blanket
4- Unisex warm winter puffer blanket
5- Unisex hat, mittens and scarf set
6- Unisex socks, pair
7- Unisex socks, pair

2.

PRACTICAL CONSIDERATIONS WHEN CONDUCTING AN ESA

The sector analysis should cover the whole sector of education. In principle, the perspective should be holistic because *all levels* (pre-primary to higher education) and *all forms* of education (formal and nonformal) are interrelated. Each country, however, will handle the pre-primary subsector analysis differently, some as an integrated component within the education sector analysis and some as a stand-alone chapter within the ESA.³

The decision on whether the analysis of the pre-primary subsector should be conducted as a stand-alone ESA chapter or as an integrated approach should be made during the initial plan preparation process, as described in Module 2. (See Annex 2 for the pros and cons of the two approaches.) Ultimately, it remains the responsibility of the joint steering committee.

Preparing an ESA that adequately mainstreams pre-primary requires widening its scope and content, and involves more stakeholders. This directly affects the time and funding available to conduct the exercise.

Frequently, the allocated time is too short. Typically, an ESA might take anywhere from four to nine months to complete sufficiently, depending on the depth of the analysis and the availability of reliable data. As countries are increasingly under pressure to produce fully evidenced, costed ESPs in less than a year, the ESA process sometimes gets short-changed. Yet unless the strengths, weakness, gaps and inefficiencies are properly identified first, any programs developed will be unable to address key issues within the system. In addition, analyzing new dimensions and further analyzing existing ones will consequently lengthen the process and might also jeopardize the capacity-building approach under tighter deadlines. More in-depth analysis and more partners will also increase costs. In many cases, the Global Partnership for Education (GPE) education sector program development grant (ESPDG) helps support the

³ When separate subsector chapters are prepared (for example, for pre-primary, TVET and/or higher education), they must be closely coordinated to ensure adequate and coherent articulation of the analyses.

BOX 1.

COUNTRY EXAMPLES OF ESAs: LIBERIA AND SOUTH SUDAN, 2016

There are many possible structures of an ESA and different ways that pre-primary can be incorporated. In the 2016 Liberia ESA, a chapter is devoted to ECE, but ECE issues are also included within other relevant chapters that address the overall education system, such as *Enrolment, Completion and Exclusion from Basic Education; Equity; Educational Quality and Learning Outcomes; Teachers, Teacher Management and Teacher Education; and Education Finance and Expenditure*. In South Sudan, on the other hand, pre-primary education is integrated into all chapters of the ESA.

Source: Liberia, Ministry of Education 2016; South Sudan, Ministry of Education 2016.

costs associated with the development of the ESA,⁴ along with the German Back-up Initiative or the Early Learning Partnership from the World Bank. Various sources of funding, including government funds, might be required to fully cover the cost of an ESA. As discussed in the section on data collection below, careful decisions are needed to manage the tensions that may arise between being as exhaustive as possible and keeping the activity within reasonable time and cost frames.

2.1 Main actors

Because of the ESA's technical nature, a technical team skilled in data collection and analysis usually conducts it, often with external technical assistance. For the pre-primary sector analysis, the team personnel generally come from the following stakeholders:

- Relevant line ministries responsible for supporting ECE, such as education, health, social welfare, finance, public service and planning; at both the national and subnational levels
- Heads of departments or directorates of planning and budgeting, M&E, curriculum, pre-primary personnel recruitment and development, family and community support, and other cross-cutting departments
- Education management information system (EMIS) staff, with a pre-primary focal point when existing

⁴ The ESPDG provides support to the education sector planning process, including sector analysis for which half of the grant is earmarked (US\$250,000). Currently, all GPE developing partner countries classified as low- and lower-middle-income countries, as classified by GPE eligibility categories, are eligible to apply for the ESPDG. Eligible countries that are not members of GPE may apply for this grant based on an initial communication from the country government indicating interest in joining the partnership (GPE 2018).

- Representative(s) of pre-primary providers beyond the state, such as nongovernmental organizations (NGOs), faith-based organizations (FBOs), community/civil society organizations, private providers and more
- Academic institutions working on ECE-related issues

An inclusive and participatory process that involves all relevant actors who work in or support pre-primary education is crucial because it helps ensure a more comprehensive and collaborative approach to the analysis of the subsector while fostering national ownership and building capacity on ECE-related matters. It also creates a platform for a sector-wide approach toward planning and implementation.

BOX 2.

FAVORING A PARTICIPATORY PROCESS IN THE PREPARATION OF THE PRE-PRIMARY ESA IN MOZAMBIQUE

“The Ministry of Education in Mozambique initiated a participatory process in March 2019 to conduct a diagnosis of the pre-primary subsector, as part of the development of the education sector analysis. In addition to the directorates and departments overseeing pre-primary education and the subsector action areas (curriculum, teachers, monitoring and quality assurance, etc.), the exercise involved the participation of the World Bank, UNICEF, UNESCO, civil society, private providers, universities and colleges, national parent teacher representatives, international NGOs, and the Ministry of Finance. This inclusive approach generated productive and substantive discussions that led to a common understanding of the current status of the subsector in the country, including its challenges and a shared vision for its development and strengthening (what strategies and priorities to focus on).”

Source: Mozambique, Ministry of Education and Human Development 2019.

2.2 Main steps for sector analysis

The development of the sector analysis involves three major technical phases: data collection, data analysis and identification of main challenges and areas for improvement.⁵

⁵ Section 2.2 also draws from IIEP-UNESCO (2010).

Step 1. Data collection, cleaning, and triangulation

First, it is necessary to systematically determine what data are already available. Statistical data will form the foundation for the sector analysis. Such data (or at least basic education statistics) are now readily available in most ministries of education, even if their coverage and quality are not always adequate. A core source of information for the regular school system and increasingly for pre-primary is the EMIS. However, in-depth data for pre-primary are less available and often only provide limited information on enrollment figures or teaching staff for ECE and not as much on the teaching and learning environment as well as other quality aspects such as curriculum, family engagement and quality assurance.

The information to be gathered extends beyond statistical data: Various other documents (studies, research reports, monitoring reports, project documents and more) contain both quantitative and qualitative information about education development in the country. Such documents provide a particularly useful more in-depth understanding of the sector, especially for aspects such as the quality and equity of pre-primary provision, for example.

In some cases, household surveys—such as Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS), and Living Standards Measurement Study (LSMS) surveys—may allow for fruitful complementary analysis on pre-primary and general schooling patterns and out-of-school children. Other relevant information may be drawn from human resource management information systems (HRMIS) and financial management information systems (FMIS). Where data on skills development are concerned, specific learning assessment surveys—MELQO (Measuring Early Learning Quality and Outcomes), ELA (Early Learning Assessment), IDELA (International Development and Early Learning Assessment) and more—allow for proper analysis of early competencies and the identification of potential levers for improvement. When starting the ESA process, check to see which surveys or assessments have been undertaken in your country. Annex 4 provides a summary of these tools.

Unfortunately, few education ministries have a well-organized documentation center in which such surveys, reports and documents can be easily identified. Thus, gathering this type of information often requires a special effort and can be very time-consuming.

Since the sector diagnosis should also analyze the *external dynamics* between the education system and the socioeconomic sphere, it is also necessary to retrieve data on the political, socio-cultural, demographic, macroeconomic, financial and labor market contexts, as described below in section 3. Much of the data required should be available from the central statistical office or census bureau, and the (public) authorities concerned, but it is advisable to triangulate data by consulting multiple sources. In addition, it may be necessary to consult other resources to conduct a thorough analysis of pre-primary provision, where health, protection and social welfare services may overlap with education.

Decide if collection of new data is necessary. In most cases, ESAs rely on available data and studies, and are elaborated within a tight deadline and constrained budget, leaving little time and resources to undertake new studies. Available data, however, might not provide enough quality data on provision of pre-primary. Consequently, the additional value of collecting original new information will have to be carefully weighed against the cost of collecting the new data and the time required to collect, process and analyze it. Whenever collection of new

information is judged to be indispensable, the use of a small, sample-based study rather than a large-scale survey should always be considered. In many instances, combining systematic field observation of a few cases (for example, pre-primary schools run by FBOs) and in-depth interviewing of (and/or focus group discussion with) a few specialists and stakeholders can go a long way to help planners clarify pending issues. It also encourages greater understanding of specific education problems and realities. Another option to consider is using the UNICEF *Pre-primary Sub-sector Diagnostic and Planning Tool* in a national workshop that is held during the time frame of the ESA. The results of the workshop could then be used to supplement other subsector analysis efforts.

BOX 3.

COUNTRY EXAMPLE: MOZAMBIQUE'S LACK OF DATA

"The education management information system in Mozambique is yet to collect data on preschool. As such, there is no official preschool enrolment statistic. Preschool services and pilot programs are estimated to have reached 101,259 children in 2019: 1,552 through public services; 32,561 through private services; 59,500 through community-based preschools, including the DICIPE pilot; and 7,646 through an accelerated school readiness pilot. The total number of preschool-aged boys and girls, 3–5 years old, is estimated at 2,869,927 (UNESCO UIS 2015). Using this compiled data, pre-primary enrolment rate can be estimated at 3.5%. The data is not fully disaggregated by gender and the possibility of additional preschool enrolment is possible but data limitation has also created a limited picture on enrolment nationally."

Source: Mozambique, Ministry of Education and Human Development 2019.

Use the opportunity of the ESA and ESP preparation to build up or expand and reinforce the information system of the ministry. A good information system is an essential condition, not only for the preparation of a good ESA and strategic plan but also for efficient monitoring of plan implementation. Much progress has been made in recent years developing EMIS and other information systems in education ministries. However, the scope of most systems is still limited to regular school census data, while pre-primary data, learner achievement data, risk or vulnerability data, financial management data and human resource management data either are not properly covered or are stored in different databases that often are incompatible with one another. Identification of key pre-primary data needs during the ESA process is an opportunity to plan for and update ongoing data collection processes.

Step 2. Data analysis

In this step, the data are analyzed to assess education performance and progress, as well as to identify problems, constraints and opportunities.

The analysis of statistical data should be based on a few carefully selected indicators. A first step is to assess thoroughly the quality of data in hand (for example, coverage, quality in reporting).⁶ Trend analysis is very insightful, as is the use of various sources of information (that is, triangulation). For instance, when computing the gross enrollment ratio (GER) using EMIS and population data, one usually compares the value obtained with the GER computed from household surveys. Any discrepancies between the two figures would entail some issues with data, whether population data and/or EMIS, and require coming up with new data estimates.

The next phase involves drawing up tables; establishing time series (including a first estimation of future trends); computing means, ratios, and growth rates; measuring disparities; and so on. Wherever possible, disaggregate data by subnational geographic regions and characteristics of different groups based on available information, and if contextually appropriate (for example, gender, household wealth levels, religion, ethnicity, language, displaced populations or refugees). This will reveal differences or inequities that may require the implementation of different educational strategies. While disaggregating indicators by religion, ethnicity and language can be very insightful, it may not be politically expedient in all contexts. Thus, it will need to be assessed on a case-by-case basis and handled accordingly by the technical team. In all cases, the use of graphs, maps and other infographics is highly recommended as the best way of making statistical information more understandable.

The processing and analysis of any *nonstatistical* information is generally more complex because the volume of documents and reports available can be quite sizable, and the information provided in them is not always clear-cut and sometimes redundant or even contradictory. Therefore, a detailed screening of the different documents must be carried out to identify the major issues discussed. This implies checking coherence between sources, and regrouping and ordering the information obtained by theme and level of education. Given the difficulty of collecting reliable data on issues related to ECE, it is necessary to link data by triangulation or make comparisons with multiple sources to identify common patterns or inconsistencies.

⁶ Whenever data are collected, it is critical to anticipate the need for “data cleaning.” Procedures will be required to check for invalid, incorrect and inconsistent data. This “cleaning” step is essential to ensure that quality assurance checks take place (triangulation, cleaning, correction of data from different sources), as the information provided may either be redundant or even contradictory. This can be a time-consuming process that, if not anticipated and handled correctly, may lead to information becoming “out of date” and losing its value to policymakers. For more information, please see UNESCO (2005).

Step 3. Identification of main challenges and areas for improvement

The ESA results should then serve to do the following:

- Identify and document the major strengths and weaknesses of the education system in general and the pre-primary subsector in particular, including the risks and vulnerabilities that may impact the system.
- Make some draft proposals about future objectives to pursue and possible priority actions to take.

At this point, results should be widely discussed and shared with a wide range of stakeholders to establish a consensus on the main challenges facing the education system, including pre-primary, and to foster ownership:

- Pre-primary teaching personnel
- Parents, families and communities
- Disadvantaged groups and minorities
- Research community
- International development community, such as multilateral and bilateral development partners, UN agencies, international and national NGOs, and others

This phase of the process also serves to prepare and establish the basis for the planning phase as it may include initial proposals about future objectives or possible priorities and strategies based on the priority challenges identified to be further tested and validated during the next planning stages.



3.

ADDRESSING ECE IN ESAs: HOW TO ANALYZE THE PRE-PRIMARY SUBSECTOR

Since the education sector plan builds on the findings of the ESA, it is critical that the ESA takes into account the key dimensions important for pre-primary. The *ESA Methodological Guidelines* and the *Conceptual Framework* (along with its companion, the *Pre-primary Sub-sector Diagnostic and Planning Tool*) offer complementary approaches for analyzing the subsector, but they both recognize four aspects as being critical to investigate:

- The ***national context and enabling environment***, consisting of the overall national context in which the subsector evolves, by assessing the political, geographical, humanitarian, legal, demographic, social, macroeconomic and institutional contexts.
- The ***performance*** of the subsector, by examining access, quality, effectiveness and equity.
- The ***cost and financing***, including the *financial resources* available to the education system in general and to pre-primary in particular, and an analysis of costs and how resources are used.
- The ***resource management*** of the subsector.

Each aspect is explored below, with a short explanation of its purpose followed by guiding questions and some general analytical considerations and sources of data, as well as a country example illustrating the aspect in question. The specific methods, indicators computed and sources of data used to drive the analyses are not presented here. The appropriate technical references for each topic are provided. They can also be found in the Further Readings list. In addition, a list of key indicators that can guide and support the analysis is provided in Annex 1. The focus here is on pre-primary, but because this subsector is closely related to the overall functioning, management and financing of the whole education system, we also refer to the global education setting when relevant.

3.1 National context and enabling environment

The starting point of any ESA is understanding the broader national context in which the education system and the pre-primary subsector evolve, to assess to what extent this context is conducive for creating a favorable enabling environment⁷ for pre-primary to thrive. Indeed, this broader national context can either hinder or facilitate the successful establishment and functioning of the subsector.

The national context and enabling environment can be appraised through the analysis of four areas:

1. Political, humanitarian, demographic and social context
2. Policy and legal frameworks
3. Ministerial leadership and capacity
4. Macroeconomic and public financing frameworks

3.1.1 Political, humanitarian, demographic and social context

The political, humanitarian, demographic and social context, while being exogenous to the education system, shapes education development, including the pre-primary subsector in many ways.⁸ Analysis of the demographic context enables the estimation of the number of children for whom the system will have to provide services. This is the starting point of any education plan. Beyond the purely demographic dimension, it also helps to present some basic social indicators that can impact the demand for education, for instance, the share of the population living below the poverty line, malnutrition indicators, the number of orphan children, and infant and maternal mortality. In addition, humanitarian and post-crisis situations pose a particular set of challenges. These crises can undermine years of investment and have long-lasting consequences that persist long beyond the cessation of violence.

7 The enabling environment refers to the broader conditions that surround the development and effective functioning of a pre-primary subsector and the provision of quality early education services (UNICEF 2019b).

8 Please refer to the *ESA Methodological Guidelines*, volume 1, chapter 1, section 1 (specifically 1.1–1.4 on demographic and social indicators computation and analysis), and the forthcoming volume 3's chapter on risk and conflict analysis. Also refer to the UNICEF 2019 *Conceptual Framework*, section 3 on the enabling environment.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • What are the main political and administrative features of the country? • Are there specific vulnerabilities (natural and/or human-made hazards, social conflicts) that have the potential to disrupt education? How might they affect the pre-primary subsector in particular? • How does the education system, and the pre-primary subsector, respond to linguistic, ethnic, cultural or social diversity? • At what rate has the general population been growing, or migrating, recently? What are the related challenges for the development of schooling, including pre-primary education? • What is the proportion of the population living in urban settings? How is the population distributed across the national territory? How does this affect the organization of education services, including pre-primary services? • What is the proportion of the population living in poverty? Which groups are particularly affected? What are the implications on special support needed to promote their participation in pre-primary? • What is the foreseeable size of the pre-primary age population and what does it mean for the supply of services? 	<p>Collect and review a series of demographic and social indicators from both a historical and geographic perspective to assess how they may affect both the supply and demand for pre-primary services.</p> <ul style="list-style-type: none"> • Population by gender and age group: (pre-primary, primary and secondary) • Population growth rates, urbanization rate, population density • Social development indicators (e.g., malnutrition, infant mortality, the share of the population living under the poverty line, literacy, HIV and malaria prevalence) <p>Also review existing education and pre-primary policies, risk and vulnerability surveys and conflict analysis reports from the perspective of how they affect both the provision and quality of pre-primary education.</p>

BOX 4.

COUNTRY EXAMPLE: CÔTE D'IVOIRE SCHOOL-AGE POPULATION GROWTH

In Côte d'Ivoire, the overall school-age population (from pre-primary through tertiary) has increased from 8.7 million in 2000, to 10.9 million in 2012, and is expected to reach 12.5 million by 2025. The population of the pre-primary subsector is growing slower than other subsectors (following a slowdown in population growth); nevertheless, it will continue to grow, keeping the pressure on the pre-primary subsector for additional educational inputs in the future (for example, teachers, classrooms and teaching and learning materials).

TABLE B4.1.

EVOLUTION OF SCHOOL-AGE POPULATION, CÔTE D'IVOIRE, 2000–2025

	2000	2012	2014	2025	GROWTH RATE	
	#(MILLIONS)				2000–12	2012–25
Total population	16 211	21 711	22 671	27 273	2.5%	1.8%
3–5 years	1 622	1 929	1 961	2 050	1.5%	0.5%
6–11 years	2 813	3 451	3 532	3 852	1.7%	0.8%
12–15 years	1 597	2 030	2 094	2 359	2.0%	1.2%
16–18 years	1 071	1 395	1 446	1 675	2.2%	1.4%
19–23 years	1 572	2 106	2 196	2 631	2.5%	1.7%

Source: Côte d'Ivoire 2016.

3.1.2 Policy and legal frameworks

The existence of a policy framework for pre-primary helps clarify the roles and responsibilities of different actors and agencies.⁹ This is particularly important for ECE given the number of actors involved in the provision of services. It also helps with the mobilization of both public and private resources by offering clear program orientations.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none">• What are the policies and regulatory frameworks supporting the pre-primary subsector?• Is pre-primary part of compulsory education? If so, from what age?• Is pre-primary education provided free? If so, from what age?• Is ECE overseen by a separate directorate or hosted within general education or primary education?	<p>Review and analyze national policy and regulatory documents:</p> <ul style="list-style-type: none">• National development strategy documents or Poverty Reduction Strategy Papers• International commitments (e.g., SDGs, CRC)• Multisectoral policies that include a component on pre-primary• Specific policies for pre-primary, relevant legal framework, former ESAs and ECE-related analysis, and SABER ECD country reports

⁹ Please refer to the *UNICEF 2019 Conceptual Framework*, section 3 (related to the enabling environment), and to the *ESA Methodological Guidelines*, volume 2, chapter 7, section 1.2.

BOX 5.

COUNTRY EXAMPLE: TOGO PRE-PRIMARY LEGAL AND POLICY FRAMEWORK

The Togo Education Reform of 1975 promoted the expansion of preschools, and in 2008 the government of Togo abolished tuition fees for all public preschools. Although it is free, public pre-primary education is still not mandatory; as of 2012, the gross enrollment rate for preschool was 11 percent. The government aims to increase pre-primary enrollment to 22.6 percent by 2020 by expanding access to vulnerable children and expanding the use of community childcare centers in rural areas (Togo Education Sector Plan 2010–2020).

Key laws, plans and policies addressing pre-primary:

- Education Reform in Togo 1975
- Children’s Code 2007
- Togo Constitution Article 35
- National Education Policy 2010-2020
- The African Charter on the Rights and Welfare of the African Child
- The UN Convention on the Rights of the Child
- Draft Standards for School Mapping 2009
- Norms and Standards Applicable for Child Care Centres for Vulnerable Children, 2010
- National Child Protection Policy 2011
- DSRP II/ SCAPE (Poverty Reduction Strategy)

Sources: Togo 2014; World Bank 2013.

3.1.3 Ministerial leadership and capacity

Strong leadership in the pre-primary subsector will guide its vision, development and improvement.¹⁰ In the context of devolution, assignment of significant leadership responsibilities to subnational and municipal levels is likely to enhance responsiveness. This must be accompanied, however, by sufficient capacity and the coordinated involvement of all levels of government, from national to subnational to local. Policy directives are likewise needed at all levels that specify authority, accountability, funding and roles and responsibilities for planning and management of the subsector.

¹⁰ See the UNICEF 2019 *Conceptual Framework* section 3 (on the enabling environment), and the *ESA Methodological Guidelines*, volume 2, chapter 7, subsection 1.2. Volume 3 (forthcoming) of the *ESA Methodological Guidelines* will feature a specific chapter that provides insights on how to assess institutional capacity.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • Is there a recognized/legitimate ministerial anchor in charge of promoting pre-primary education? • Is pre-primary overseen by a separate directorate or by another department/directorate? • Are the roles and responsibilities of the ECE leadership clearly defined and represented in the organizational structure of the ministerial anchor? • What are the existing channels of communication and coordination available to ensure adequate articulation between the various actors involved in ECE at both the central and subnational levels? Are they effective? • Are the roles and responsibilities of implementing agencies (e.g., national government, subnational governments, schools, teachers) clearly stated and understood by all? 	<p>Review existing audits or evaluations of the education administration in general and the pre-primary administration in particular (e.g., SABER-ECD report).</p> <p>In case of lack of adequate information, a dedicated institutional/organizational analysis might be undertaken.¹¹ Such analyses require considerable work and resources. So if the exercise has not already been completed before conducting an ESA, it can be planned for after, including as a priority within the ESP.</p>

3.1.4 Macroeconomic and public financing frameworks

The analysis of a country's macroeconomic and public finance contexts enables the estimation of past public expenditure, and the resources allocated to the pre-primary education, as well as likely resources available in the future.¹²

11 An institutional (or audit/organizational) analysis assesses the capacity and efficiency of educational administrative structures, to identify challenges and constraints within the system. Institutional capacities are analyzed at the level of individual staff, organizational units, the public administration, and the overall political, economic and social context. The analysis can be conducted for the education ministry as a whole or specifically for the department in charge of pre-primary. An institutional analysis can be an integral component of an ESA, sometimes comprising an entire chapter, or can also be conducted as a stand-alone exercise. For ECE, an institutional analysis would closely examine issues of both horizontal and vertical coordination.

12 Refer to the *ESA Methodological Guidelines*, volume 1, chapter 1, section 2 (macroeconomic and public finance contexts), and to chapter 3, sections 1.1–1.3 (education public financing), and to the UNICEF 2019 *Conceptual Framework*, section 3 (on the enabling environment).

BOX 6.

COUNTRY EXAMPLE: MINISTERIAL LEADERSHIP FOR ECE IN LIBERIA

“The country has made efforts in establishing an early childhood education system and governance structure. As an institutional anchor to coordinate ECE, the Bureau of Early Childhood Education was established under the [Ministry of Education’s] Department of Instruction by the Education Reform Act of 2011. In the same year, the Liberia National Inter-Sectoral Policy on Early Childhood Development (NIPECD) was launched as the first national ECD policy to provide strategic guidance to the development of the sector. The NIPECD aims to increase access to and quality of ECD services, to support greater community and family involvement, and to promote greater collaboration and coordination among ministries. While the [Ministry of Education] is the lead ministry of ECD services, the policy encourages inter-sectoral coordination and collaboration by identifying relevant ministries and defining their responsibilities, including Ministry of Health and Social Welfare, Gender, Children and Social Protection (formerly Gender and Development), Youth and Sports, Internal Affairs, Finance, and Justice.”

Source: Liberia, Ministry of Education 2016.

Indeed, the funding available to ECE depends on a number of elements (Figure 1):

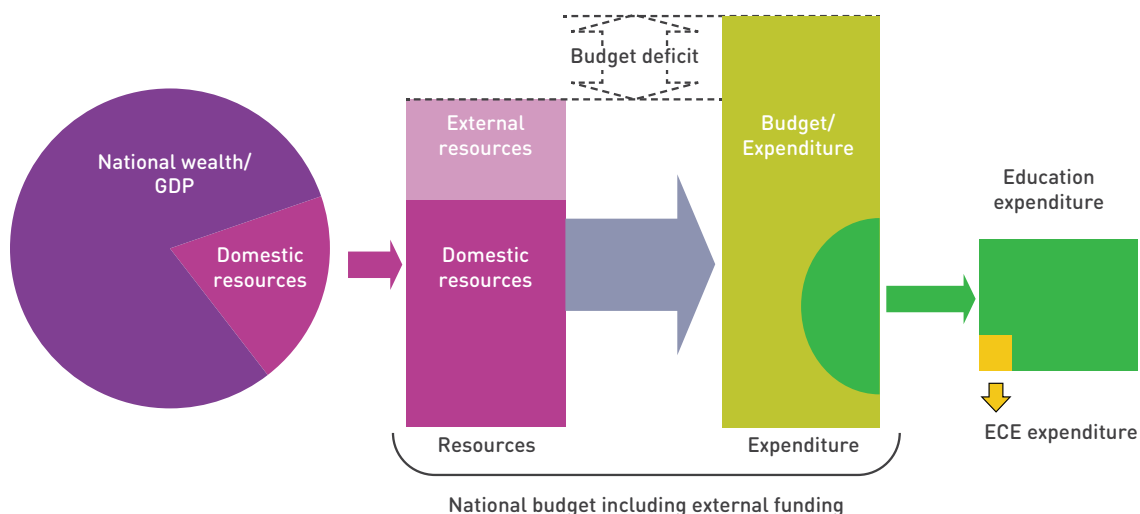
- Its share in the overall education budget
- Share of the education budget in the government budget
- Share of the government budget in the GDP
- Growth of GDP and its size

An analysis of the evolution of these various factors gives insights into the capacity of the state to levy taxes to operate public services, and the level of priority that was recently given to education, including to pre-primary. It also helps estimate evolutions in the future and therefore the funding possibly available to the education sector and specifically to pre-primary.

It is worth keeping in mind that, in many countries, the funding for ECE comes from not only public sources but also a diversity of private ones. This will be examined in more detail in section 3.3.

FIGURE 1.

RELATION BETWEEN GDP, TAX INCOME, EXTERNAL RESOURCES, PUBLIC EXPENDITURE, AND ECE EXPENDITURE



Source: Adapted from GPE et al. 2014a, 51.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • Is the macroeconomic outlook (economic growth, public revenues and financial priority for education) favorable for education spending? • Is pre-primary education given priority within education resources allocation and spending? • What is the commitment of partners and the dependence vis-à-vis external funding for the education sector as a whole and for pre-primary in particular? 	<p>An analysis of the macroeconomic environment is structured around the relation between national wealth, GDP and domestic (tax and nontax) and external resources on the one hand, and public expenditure, especially education expenditure (from which ECE expenditures derive), on the other. This is illustrated in Figure 1.</p> <p>Collect and compute a series of indicators (e.g., GDP growth rate, tax burden, share of public resources allocated to education, share of education resources allocated to pre-primary education) and assess the extent to which the macroeconomic framework and budgetary trade-offs are favorable or not to the education sector in general and to pre-primary in particular.</p>

BOX 7.

COUNTRY EXAMPLE: KENYA EDUCATION EXPENDITURE

In Kenya, government spending on education increased by 65 percent over 2010/11 and 2014/15. However, while spending on education increased in current absolute terms, it somewhat remained stable as a proportion of the GDP, around 5.3 percent, and declined as a share of government expenditure. Kenya has been going through a period of infrastructural expansion and as such the general drop in the proportion of government expenditures spent on education is consistent with the increased spending on roads and expansion of energy sector as well as support to non-education functions in the county governments.

Source: Kenya, Ministry of Education 2018.

TABLE B7.1.

GOVERNMENT EXPENDITURE ON EDUCATION, 2010–11–2014–15

	2010–11	2011–12	2012–13	2013–14	2014–15
Government expenditure on education (KES, millions)	169,093	205,262	230,599	250,551	284,792
As a share of total government expenditure	17.7%	20.2%	18.6%	16.3%	14.6%
As a share of GDP	5.3%	5.5%	5.4%	5.3%	5.3%

Source: National Treasury, Ministry of Education, Kenya National Bureau of Statistics, authors' calculations.

The breakdown of education expenditures by subsector shows that while the share of education spending going to early childhood development and education (ECDE) has slightly increased, from a low 0.2 percent of education expenditure in 2010/11 to 1.8 percent in 2014/15, it has experienced the most important surge over the period (twelfefold compared with less than double for the others). However, this situation follows a stark low level of spending in ECDE in 2010/11. ECDE remains in 2014/15 the subsector receiving the smallest share of the education budget.

TABLE B7.2.

BREAKDOWN OF PUBLIC EXPENDITURES BY EDUCATION LEVEL, CURRENT PRICE, KENYA, 2010–11 AND 2014–15

	2010–11		2014–15	
	KES, MILLIONS	%	KES, MILLIONS	%
Administrative services	15,943	9,4%	17,137	6,0%
ECDE	405	0,2%	5,073	1,8%
Primary	71,546	42,3%	118,59	41,6%
Secondary	52,78	31,2%	87,108	30,6%
TVET	6,836	4,0%	14,603	5,1%
University	21,583	12,8%	42,281	14,8%
Total	169,093	100%	284,792	100%

Source: National Treasury, Ministry of Education, Kenya National Bureau of Statistics.

3.2 Performance of the pre-primary subsector

The performance of the subsector can be analyzed through various angles related to access, quality, effectiveness and equity. While equity can be analyzed as a stand-alone element, it can also be mainstreamed across the various angles of analysis; we have taken the second option here, to avoid duplication in the issues raised.

3.2.1 Access and equity

Collecting and analyzing comprehensive access data can help determine the conditions and scope of current pre-primary availability and gaps and inequities in the system.¹³ Variables that affect disparities in access will relate to both the available supply of ECE services and the demand for services by families. Supply factors usually include availability and distance to the services and their quality level; demand factors can include high fees, lack of interest in services because of their poor quality or weak relevance and families' ignorance about the benefits of pre-primary education. Disentangling supply and demand factors to determine the ones at play is very useful in designing the right policies.

BOX 8.

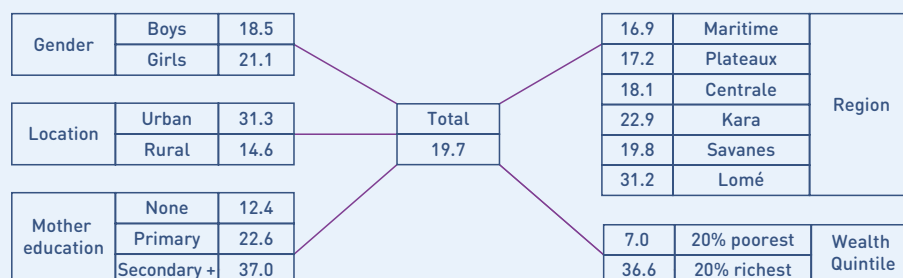
COUNTRY EXAMPLE: TOGO ECE PROGRAMS GER AND DISPARITIES IN ACCESS

According to the MICS, 19.7 percent of Togolese children aged 3–5 years old were attending some sort of ECE program in 2010. However, this average hides important disparities. By examining disparities by gender, region, household wealth and parents' education, some of the inequities of these enrollments become apparent, with more than twice as many urban children participating in ECE programs than rural children, and only 7 percent of the poorest families compared with 36.6 percent of the richest.

Source: Togo 2014.

FIGURE B8.1.

DISPARITIES IN ECE PROGRAMS PARTICIPATION AMONG 3–5 YEARS OLD, TOGO, 2010



Source: MISC 2010.

¹³ Refer to the *ESA Methodological Guidelines*, volume 1, chapter 2 (for methodology to analyze access) and chapter 6 (for equity analysis), and volume 2, chapter 7, sections 2.2 (on ECD programs characteristics), 3.2 (on access), and 4 (on disparities in access).

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • What does the pre-primary supply landscape look like? For example, how many public ECE classes are available? How many and which private organizations are providing ECE? • How has access to pre-primary changed in recent years? What is driving ECE availability: public or private provision? • What is the proportion of overage children in pre-primary? • Do all children have the same chance to access pre-primary? If not, who and how many are most at risk of not accessing ECE? Are there gender disparities in access? • Is the lack of access to ECE because of a lack of supply or rather to low demand from families? What is the relative importance of these supply and demand problems? • Are mechanisms in place to reduce disparities in ECE access? If yes, are they effective? • Are there some interventions that seek to encourage family participation in pre-primary education? 	<p>Collect and analyze comprehensive access data (usually from the EMIS and household surveys such as the MICS, DHS and LSMS) to determine the conditions and scope of current pre-primary availability and access and any gaps and inequities in the system.</p> <p>To discover disparities in access, examine access patterns at the subnational and local levels, disaggregated by sex, urban/rural and region, and by patterns of poverty, ethnicity, language and other relevant dimensions (e.g., children with disabilities, children from single-parent households, refugees or internally displaced children).</p>

Based on MICS 2010.

3.2.2 Quality, effectiveness and equity

Quality pre-primary programs are expected to contribute positively to children’s *school readiness*, which in turn is associated with enhanced internal efficiency and quality outcomes at the primary level. No consensus exists, however, on what constitutes a quality pre-primary service, or how to analyze and evaluate its quality. The OECD (2015) considers quality as consisting of two salient components: *process* (for example, use of a curriculum, staff characteristics, teacher behavior and practices, and staff-child interactions) and *structural* (for example, space, group size and safety standards). In this module, we incorporate elements of the UNICEF *Conceptual Framework* into the OECD definition and consider the following aspects when examining the quality, effectiveness and equity of pre-primary provision:

- Structural quality
- ECE teachers and personnel
- ECE curriculum
- Family and community engagement in ECE
- Effectiveness: the effects of pre-primary on school readiness

As noted earlier, existing data for analyzing the pre-primary subsector are often limited. This is especially true when it comes to analyzing the quality and effectiveness of pre-primary services. Adequately assessing some of the question suggested in this section will require the analysis of other data sets beyond the country EMIS. Before starting your analysis, see what other information is available to supplement your analysis (for example, SABER ECD reports, MICS [the ECD module], ELA, MELQO, IDELA and any research studies that have been conducted on ECE in your country).¹⁴

While the first three aspects belong to the school environment and address both structural and process quality, the fourth aspect takes another angle, looking at the quality of the home and community environment and their engagement vis-à-vis early learning—critical dimensions not to be overlooked. An equity lens is also usually applied to uncover possible disparities by pre-primary school ownership and location and other relevant dimensions.

Structural quality

The availability and arrangement of infrastructure to house pre-primary services (such as buildings, classrooms, and playgrounds) are important components of quality.¹⁵ Provision of a safe, clean and healthy environment is critical to ensure not only that young children can learn effectively and are safe, but also that teachers can provide the necessary inputs in an appropriate manner. When they exist, these features are based on service quality standards at the national level.

¹⁴ See Annex 4 for more details on the various household surveys and assessment tools available.

¹⁵ See the ESA Methodological Guidelines, volume 2, chapter 7, section 5.1.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • What and how many facilities are available: classrooms, play areas, toilets? Are they sufficient? Are facilities accessible and gender-responsive? • Are facilities accessible and gender-responsive? • What are the conditions of the facilities? Do they fulfill requirements in safety, hygiene, sanitation and learning? • What is the availability of learning and play materials (books, toys, games, manipulatives, etc.)? • What is the pupil-teacher ratio (PTR), adult-child ratio (including teachers, nannies, etc.) and qualified adult-child ratio? How large are classes? How do they compare with basic education? • Do norms and standards exist? Are they adhered to (when they exist)? 	<p>Review existing ECE policy and standards documents and compute specific indicators (e.g., adult-child ratios, PTRs, class size, availability of learning and play material). Use available data from the EMIS or available ECE surveys such as the MELQO.</p> <p>Equity analysis: Further disaggregate indicators by urban/rural, region and school ownership (public, private) to assess disparities.</p>

Pre-primary teachers and personnel

Research clearly shows that to deliver high-quality ECE services, you need a well-prepared workforce.¹⁶ Committed, competent teachers are at the heart of effective services delivered at the local level. The ability of pre-primary teachers to create an engaging environment through sensitive, positive and stimulating interactions with children makes a difference in children’s learning and development.¹⁷

In addition to teachers, the pre-primary workforce includes other personnel who are critical to the success of the subsector and who provide the enabling environment for teachers to deliver quality education in the classroom: principals/program directors, inspectors/supervisors, mentors, providers of pre- and in-service professional development, and other support staff (such as paraprofessionals or disabilities specialists).

¹⁶ See, for example, Saracho and Spodek (2007).

¹⁷ In this section, we focus on teacher quality/training. Management aspects related to teacher’s recruitment, deployment, professional status, remuneration and careers, absenteeism and attrition are addressed in the “resource management” section later in this module. For more on teacher qualification issues, see Core Function 3 in the UNICEF 2019 *Conceptual Framework*, and the *ESA Methodological Guidelines*, volume 1, chapter 4, sections 3.1.3 and 3.2.1, and volume 2, chapter, 7, section 5.1.

BOX 9.

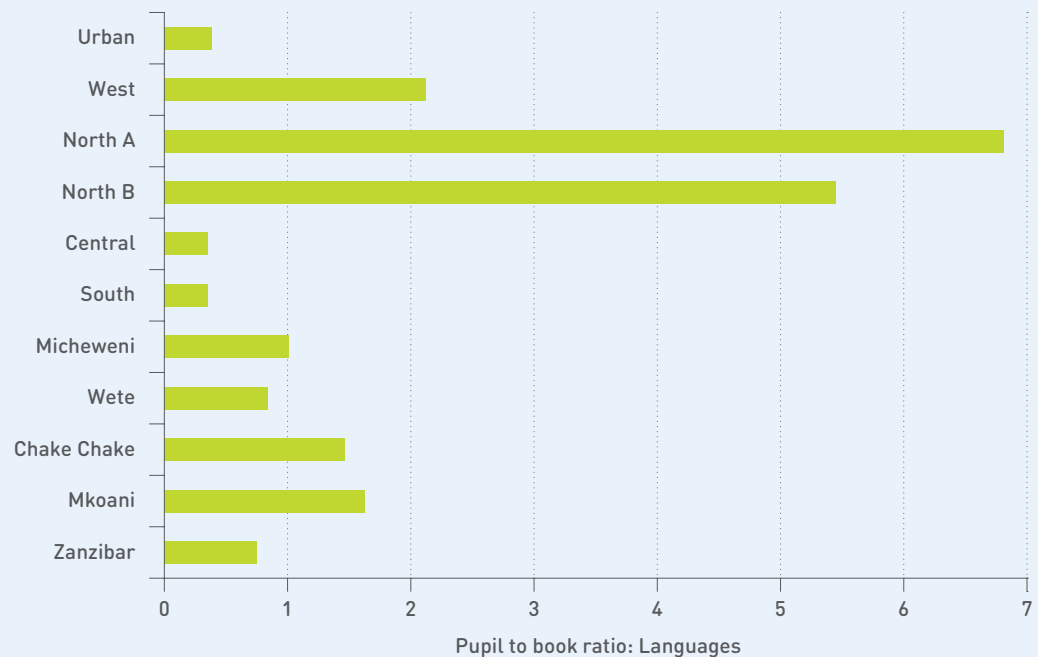
COUNTRY EXAMPLE: ECE PRESCHOOL RESOURCES IN ZANZIBAR

Pedagogical resources

“Most preschools have adequate indoor locally and factory-made materials, but around half of centres visited for the UNICEF study did not have outdoor equipment. Often outdoor equipment could not be used because of lack of security at the centre grounds. Distribution of resources is not even. Government pre-primary schools vary in their access to books. [Figure B9.1] shows the ratio of pupils to language books in Government pre-primary schools across the districts. The West, North A and North B districts have the highest ratios, meaning fewer books and more children are having to share. Pre-primary schools are supposed to have books in maths, languages, arts and crafts and religion, which the Ministry [of Education] provides. However, the last time the Ministry bought books was five years ago (so newly opened pre-primary classes would not have any). ZIE are now producing new books for pre-primary schools.”

FIGURE B9.1.

PUPIL TO LANGUAGE BOOK RATIO IN GOVERNMENT PRE-PRIMARY SCHOOL, 2014



Source: EMIS.

Source: Zanzibar, Ministry of Education and Vocational Training 2015.

Assessing to what extent pre-primary teachers and other personnel are adequately trained, valued and supported is crucial for sound and equitable development of the pre-primary subsector.¹⁸ These issues are also closely related to personnel recruitment and deployment procedures (discussed in section 3.4).

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • Are there clear job profiles and staff qualifications for the pre-primary workforce? • What is the proportion of qualified pre-primary teachers? How does it compare with primary and secondary education levels? Is there a gender balanced ratio? • Who provides training and pedagogical support to pre-primary teachers? What is their capacity? • What types of pre-service or in-service training are required? • Are there gender disparities in training participation? Are the pre-service trainings accessible and gender-responsive? • What are the qualifications of pre-primary leaders (principals, directors, etc.)? What types of specialized ECE training do they undertake? Is there a gender-balanced ratio? Are there gender disparities in training participation? 	<p>Review existing ECE policy and standards documents and compute specific indicators (e.g., share of qualified pre-primary teachers, share of qualified ECE principals) using available data from the EMIS, human resource databases (HRMIS, payroll) or dedicated ECE surveys such as the MELQO, ELA, IDELA or other sources of information on training provided for pre-primary teachers.</p> <p>Equity analysis: Further disaggregate indicators by urban/rural, region, sex, disability, and school ownership to assess disparities including in the level of adherence to standards when they exist.</p>

ECE curriculum

Establishing an ECE curriculum framework that is developmentally and culturally appropriate and officially recognized by the government is a prerequisite of quality pre-primary education.¹⁹ An effective pre-primary subsector considers how a curriculum designed for pre-primary-age children meets their cognitive, language, socio-emotional and physical development needs and fits within the context of later expectations as they transition into primary education.

¹⁸ Data on teachers may come from different ministries. Coordination between ministries would be critical to collect comprehensive data, but this remains in general a major issue.

¹⁹ See Core Function 2 on curriculum implementation and development in the UNICEF 2019 *Conceptual Framework*.

BOX 10.

COUNTRY EXAMPLE: LIBERIA ECE TEACHER QUALIFICATIONS

Forty-nine percent of ECE teachers in Liberia were trained in 2015, a 20 percentage-point increase from 2007/08 (Table B10.1). For teachers to be qualified to teach ECE, they must have a “C” certificate, which is the same qualification as for teaching primary school and requires one year of postsecondary training. There was no government-approved ECE qualification, and almost all ECE teachers had no training specific to the field. In addition, 8 percent of ECE teachers had not even finished secondary school, and the rate is higher among public school teachers (11 percent).

The draft Education Management Policy outlines a new vision for teacher education in Liberia. The policy recommends introducing specializations in “C” certificate programme, including in ECD, giving special attention to ECE and ECD teachers. Indeed, the policy, echoing the National Inter-Sectoral Policy on Early Childhood Development, highlights the need to “create a strategy for career pathing in ECD” and “develop an ECD training framework.” “The draft policy also references the Education Sector Plan 2010–2020 to argue the need to develop ‘qualifications, training and career path strategy for ECD workers and teachers’ as well as establish ‘a minimum set of requirements for staff in different areas of ECD’ (MoE 2010:44). The [Ministry of Education] is considering designating one of the three Rural Teacher Training Institutes as a focal location for the development and training of ECE teachers.”

Source: Liberia, Ministry of Education 2016.

TABLE B10.1.

NUMBER OF TRAINED TEACHERS, BY LEVEL, LIBERIA,
2007–2008–2015

LEVEL	2007–2008		2015	
	#	%	#	%
ECE	3,392	29%	7,048	49.2%
Primary	8,952	40%	18,975	62.3%
Junior High	4,755	57.8%	4,295	33.1%
Senior High	1,918	53%	2,219	33.9%

Source: EMIS.

Curriculum is influenced by many factors (for example, society’s values, content standards, research, community and family expectations, culture and language) and can take many forms. Examining curriculum features is important to favor the development and implementation of a curriculum that adequately stimulates children and responds to their cultural and individual needs.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • Is there an official or mandatory curriculum framework for pre-primary education? Are different types of service providers (public, private, NGOs, etc.) using the curriculum in practice to ensure even levels of quality? What percentage of pre-primary settings use the official curriculum? • Is the curriculum age-appropriate and in line with early learning development standards (if they exist)? • To what extent does the curriculum ensure continuity with the primary curriculum (to favor smooth transition to primary school)? • To what extent is the curriculum culturally and locally appropriate? • Does the curriculum support gender-responsive pedagogy and learning materials? • What is the teaching language (mother tongue, official language or both)? • Does the curriculum offer a holistic vision to children’s development? Is it accompanied by appropriate and stimulating learning and play materials? • Is the curriculum play-based and does it provide opportunities for all forms of guided exploration and play? • How many teachers are trained on the use of the curriculum? 	<p>Review the existing curriculum framework, available teaching and learning materials and the curriculum monitoring and assessment mechanisms in place. Also review assessments conducted on the curriculum if they exist.</p> <p>Equity analysis: Consider whether learning materials are accessible and available in all relevant languages whether they model respect for different types of people (gender, ethnicity, disability, religion, etc.), and whether teaching and learning materials are distributed equitably throughout the country.</p>

BOX 11.

COUNTRY EXAMPLE: MOZAMBIQUE'S PRE-PRIMARY CURRICULUM

"There is currently no national pre-primary education curriculum in Mozambique. However, the Ministry of Gender, Children and Social Action (MGCAS) has published an educational program for ages 1–5 (Programa Educativo para 1º-5º ano, 2012) that provides pedagogic and organizational orientations for institutions looking to offer early childhood care and education services. The educative program is very broad and offers guidelines on development as well as defines the values and standards for early childhood care and education service providers. While the educational program is comprehensive, it is more appropriate for use in urban settings and cannot easily be adapted to the rural context.

"More recently, the MGCAS approved, for testing, a manual of activities for community-based preschools that offers a prescribed approach to themes and daily activities that facilitators and educators in rural communities can use. The manual adopts a play-based approach and includes songs, games and stories designed to promote an environment in which children ages 3–5 can learn.

"Public care centers (MGCAS) and community-based preschools (under the DICIPE project funded by the World Bank) use the educative program as the basis upon which to build their curriculum. It is necessary to highlight that in the absence of a national curriculum, service providers (public and private) are free to design their own curriculum or to even adopt a curriculum from other local and foreign institutions. Thus, a diverse range of learning and teaching materials are used in preschools depending on the service provider. Private schools and those run by civil society organizations use both conventional and locally produced learning and teaching materials. In the DICIPE preschools, for example, facilitators are encouraged to recycle items such as bottle caps to make toys and puzzles for the children."

Source: Mozambique, Ministry of Education and Human Development 2019.

Family and community engagement in pre-primary

Whatever their education, parents are children's "first teachers" and should be supported in this role.²⁰ Research has shown that when family members promote children's early learning at home and when they connect with staff in their children's pre-primary programs, there are many benefits.²¹ This kind of engagement enhances children's developmental and academic achievements, and it helps create stronger connections and better transitions between home and school environments. Beyond the family, children are also members of their neighborhood and local community. Communities are children's immediate contact with the real world. For this reason, community engagement is increasingly highlighted as an important aspect to consider when developing or strengthening pre-primary education.²²

20 See Core Function 4 on the related aspect in the UNICEF 2019 *Conceptual Framework*, and the *ESA Methodological Guidelines*, volume 2, section 3 (on children and their families).

21 See, for example, OECD (2006).

22 See, for example, Henderson and Mapp (2002).

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • What is the level of engagement of families in supporting children’s learning and development at home? • Is there equal treatment between girls and boys within the family? • Are there interventions that seek to encourage family support for children’s learning and development at home? • What is the level of community involvement in pre-primary through, for example, direct support (human or financial resources to ECE) or links to community resources such as health and social services? 	<p>Review and analyze education and ECE policy and strategy documents and use household surveys such as the MICS or dedicated ECE surveys such as the MELQO, UNICEF ELA or IDELA to assess the quality of the learning and development environment at home.</p> <p>Equity analysis: Disaggregate relevant information by sex, urban/rural and region, and by patterns of poverty, ethnicity, language, and other relevant dimensions to discover any disparities in practices at home.</p>

BOX 12.

COUNTRY EXAMPLE: FAMILY AWARENESS AND ENGAGEMENT IN JORDAN

“As primary caregivers, parents play a critical role in ECED. Parental teaching and parent-child relationships are important for a child’s early cognitive, physical, social and emotional development, particularly in Jordan, where the parental role in ECED takes on increased importance due to very low formal enrolment at both nursery and [kindergarten] levels. However, the importance of this role is not sufficiently recognized. A recent survey found that 55% of mothers ‘totally’ or ‘somewhat’ believe that parental care at home has limited impact on a child’s learning outcomes. This demonstrates that information about simple, cheap, and effective approaches that parents might easily adopt and implement, such as reading with their children each day, is not widespread. The same survey also identified that for households with children under five:

- 65% of households do not have age-appropriate books for their children
- 41% of mothers do not read to their children
- 40% of mothers do not teach their children any letters, numbers, or words.

“Expectations of parents and families are not explicit and there has been little concerted effort to engage parents around these issues, apart from the Better Parenting Programme designed by UNICEF.”

Source: Jordan 2015, 71.

BOX 13.

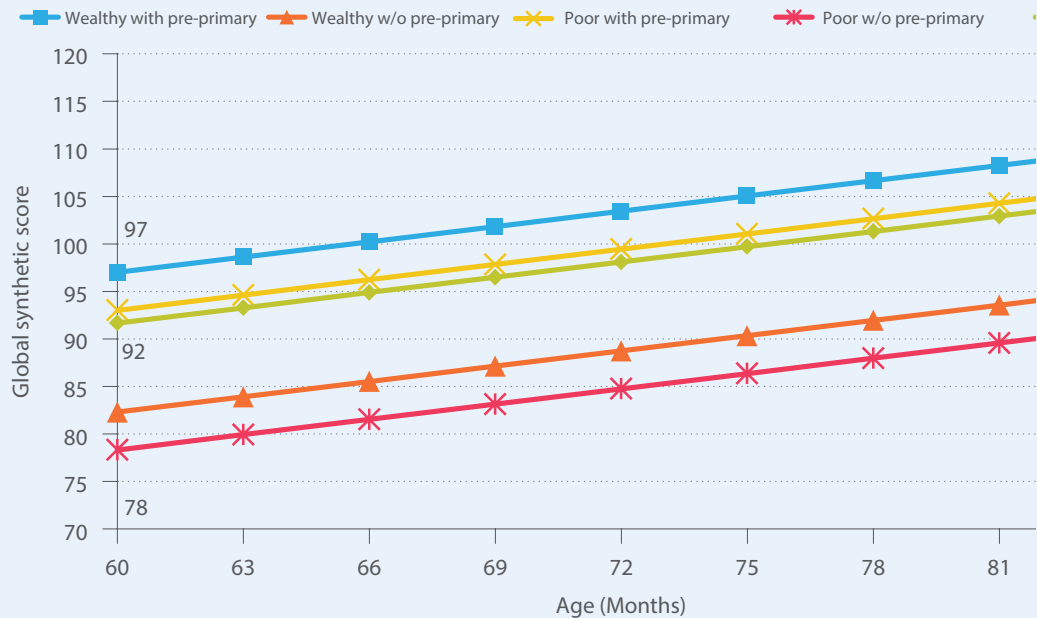
COUNTRY EXAMPLE: SCHOOL READINESS MEASURE USING EARLY LEARNING ASSESSMENTS IN CAPE VERDE

The UNICEF Early Learning Assessment tests the skills of children entering primary school, focusing on four major domains that are identified as critical for children’s development, and for primary school readiness: cognitive skills, motor skills, language skills and social development. The analysis of the skills assessment takes into account the influence of the characteristics of children and their families, to determine the strength of the correlation between children’s preschool history and their skills acquisition.

The graph below presents the overall composite scores in Cape Verde (for a total sample size of 1,190 pupils in grade 1 in 92 primary schools, tested at the beginning of school year) showing the impact of age, family wealth, and whether or not the child attended preschool. It shows that a child’s development is strongly correlated to age but also significantly impacted by family situation and preschool attendance.

FIGURE B13.1.

NUMERICAL SIMULATION OF THE GLOBAL SYNTHETIC SCORE OF CHILDREN BY AGE, HOUSEHOLD WEALTH LEVEL AND PRE-PRIMARY EDUCATION BACKGROUND, CAPE VERDE, 2012



Source: UNICEF WCARO 2015a.

Effectiveness: The effects of pre-primary on school readiness

Evaluating the effectiveness of ECE services involves examining their direct effect on children’s cognitive, language, socio-emotional and physical development, as well as on the transition to primary, repetition rates in lower grades, early dropout and learning outcomes. The analysis of children’s outcomes at the pre-primary level can shed light on the quality of the pre-primary services being delivered.²³

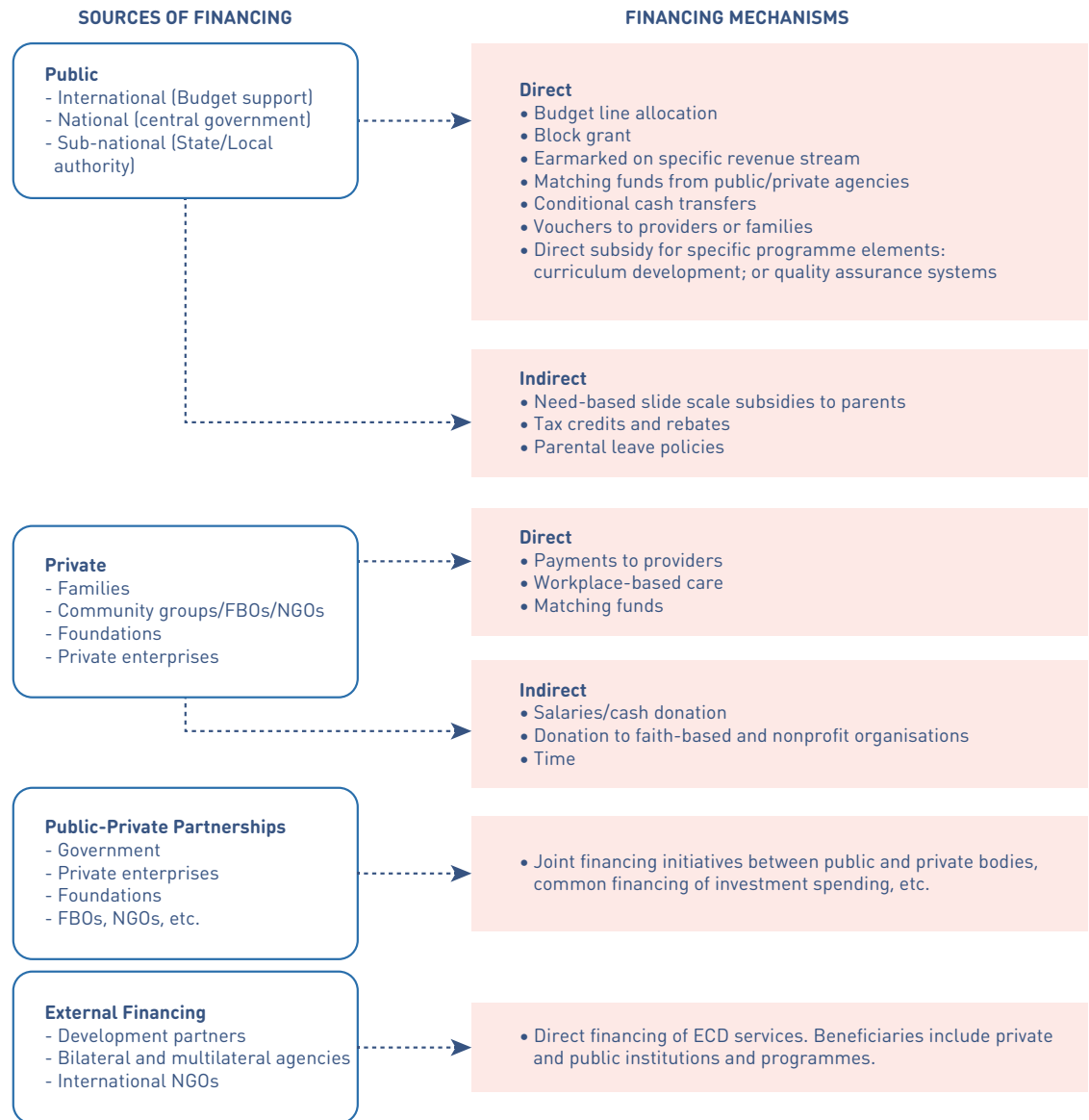
SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none">• To what extent do children have the expected cognitive, socio-emotional and language skills expected at primary school entry?• Is the transition to primary school smoother: Are children with a pre-primary background more prone to start primary school at the right age? To repeat less in early primary grades? And less inclined to drop out early?• Do primary school pupils with pre-primary experience display higher learning outcomes in primary learning assessments?	<p>Use appropriate household, skills and learning assessment surveys, such as the MELQO, UNICEF ELA, IDELA, MICS, EGRA/EGMA, PASEC and SACMEQ, to examine the effect of ECE interventions and their characteristics on child development and on primary education indicators (e.g., transition to primary school, repetition at grades 1 and 2, early dropout, early grade learning outcomes)</p> <p>Equity analysis: Disaggregate relevant information by sex, urban/rural and region, and by patterns of poverty, ethnicity, language and other relevant dimensions to discover any disparities.</p>

There is often a lack of data on children’s outcomes at the pre-primary level (which may be due to a lack of learning standards, monitoring and quality assurance systems, and so on). In such cases, data from other sources (such as household surveys, studies and more) can be considered to fill the gaps or complement the existing data. The analysis of child outcomes at the pre-primary level in Cape Verde (Box 13) illustrates this.

²³ Refer to the *ESA Methodological Guidelines*, volume 2, chapter 7, section 5.2 (on efficiency of ECD services).

FIGURE 2.

EXAMPLE OF PRE-PRIMARY FINANCING SOURCES AND MECHANISMS



Source: Adapted from Belfield (2006), in GPE et al. 2014a, 31.

3.3 Cost and financing of pre-primary

The purpose of analyzing cost and financing for education in general and pre-primary in particular is to look at the evolution of cost and financing and their patterns to gain a better understanding of what resources are available, how they are used and to what extent they have been used in an effective and equitable way.²⁴ This section addresses two broad sets of questions:

1. Who is paying for education in general and pre-primary education in particular? How much, and for what?
2. How much does it cost per pupil?

(See Annex 3 for information on key concepts related to cost and financing.)

3.3.1 Who is paying for education, and specifically pre-primary?

Pre-primary services are financed by a range of funding sources: public (from national, regional, and local government budgets); private, including business, charity and parents; and external donors. Unlike for formal primary education, public resources are usually not the main source of financing for pre-primary. Public financing of pre-primary, which in most cases is the only source of financing that is tracked (not without some challenges though), provides a very incomplete, narrow and biased vision of funding available for the subsector.

Being able to map and track the various sources of funding and related financial mechanisms, and assess their respective amounts, is critical for an accurate understanding of the costs as well as the level and composition of funding available for the subsector. This also facilitates the assessment of issues of equity, sustainability and the scope for new funding to scale up pre-primary programs. Figure 2 highlights the different sources of ECE funding and mechanisms that can be helpful in this analysis.

Yet, information on financing is often difficult to collect. This is true for education in general and particularly so for pre-primary. As far as public expenditure is concerned, data on pre-primary are often merged with primary expenditure. In such cases, detailed analyses of budget, payroll, HRMIS and EMIS data are necessary to come up with accurate estimates for the subsector. Capturing other sources of financing is difficult because the capacities of many countries' information systems (on financing and service coverage) to collect the required information from local providers and consolidate it at the regional and central levels are weak (Levin and Schwartz 2012). Data on household spending are also scarce. Information on nonpublic financing may be found in National Education Accounts when those exist; if not, there may be a need for surveys to collect information that is otherwise unavailable.

²⁴ See the National Education Account Methodology, which is well suited to conducting this exercise. Another useful resource is the *ESA Methodological Guidelines*: see volume 2, chapter 7, section 1.3 (on ECD cost and financing), and more generally volume 1, chapter 3 (on cost and financing).

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • What are the respective contributions by government (national, regional, and local government); private, including business, charity and parents; and external donors by subsector? Does pre-primary education fall within this general pattern? What are the implications for the pre-primary subsector? • Do private contributions penalize the poorest, especially for pre-primary education? • What is the structure of spending by category and by subsector: What goes to teachers, administrative personnel and other non-teaching staff salaries; teaching and learning materials; social spending (scholarships, meals, etc.) and other recurrent expenditure under recurrent expenditure? How much goes to capital expenditures, buildings and equipment? • Are the patterns of spending by category different for pre-primary education compared to other subsectors? What are the implications for the pre-primary subsector? 	<p>Collect and compute a series of indicators (e.g., data from national bureaus of statistics, central bank or IMF/World Bank for macro indicators and ministry of finance budget data, payroll data). Also use National Education Accounts, public expenditure reviews and other funding analyses if available.</p> <p>Also, map and consolidate existing education financing from all sources—public (national, regional, and local government budgets), private (including business, charity and parents) and external donors—to come up with the global financing available for the education system as a whole and for pre-primary in particular. Then analyze how these resources are used within and across the different education levels.</p> <p>Compute specific indicators <i>by education level at minimum for the pre-primary sector</i> over time, such as the relative importance of each source of financing; the share of recurrent and capital expenditure within total expenditure, by source of financing; the breakdown of education recurrent expenditure by nature (e.g., teaching and non-teaching staff salaries, teaching and learning materials, social and welfare spending and other recurrent), by source of financing.</p>

3.3.2 How much does it cost per pupil?

The recurrent unit cost analysis component of the ESA seeks to gain a better understanding of how various resources (with a focus on public resources) are used and to what extent they have been used in an effective and equitable manner.

The unit cost—or the average recurrent spending per pupil—for a given education level is determined to a large extent by a number of factors:

- Pupil-teacher ratio (PTR)
- Pupil-non-teaching staff ratio (PNTR)
- Teacher salary costs
- Non-teaching staff salary cost
- Other recurrent expenditures, which refers to the amount and share of the budget spent on key inputs other than salary, such as training and support to teachers, quality assurance, learning materials, teaching resources and social spending

Thus, the average public current expenditure per student varies inversely with PTRs and PNTRs. It varies in the same direction as average earnings per staff member in the schools, and also in the same direction as the current expenditure per pupil in schools excluding staff costs. Knowledge of these parameters is important in that in a self-managed system, adjustment tends to be at the expense of least robust parameters (PTR, PNTR and non-staff costs in schools per student).

Governments make important choices when they decide how to spend their available—and often limited—resources in the pre-primary subsector. They can, for example, hire more qualified teachers and spend more on total salaries as a result. Or they can keep teachers' salaries lower and allocate more funds to hiring more teachers or to other expenditures, such as quality assurance, learning materials, and training and intensive support for teachers.

These decisions determine how many teachers the system can fund and support, and the pupil-teacher ratio. In simple terms, when funding is limited, higher paid teachers will result in a higher ratio of pupils to teachers. Similarly, when a higher percentage of the pre-primary budget goes to non-salary expenses, the possibility is created to give better support and training to teachers, but there's a trade-off: Teachers' salaries will need to be lower.

BOX 14.

PARAMETERS ENTERING INTO THE SETUP OF PUBLIC (RECURRENT) SPENDING PER PUPIL, BY EDUCATION LEVEL IN BURKINA FASO

In 2013, unit costs in public education varied from 58,873 CFA francs in post-primary education to 475,075 CFAF in TVET medium/long-term programs (Table B14.1). A pupil in pre-primary schools costs on average 91,925 CFAF: respectively, 29 percent and 56 percent more than a pupil in primary and post-primary. This situation is due to a much lower PTR registered in pre-primary and higher teacher salary costs (at least compared to primary). As far as operating costs are concerned, pre-primary doesn't have any. This situation is potentially harmful from a quality point of view because it entails pretty limited resources available in pre-primary schools for some quality inputs.

The relatively high pre-primary unit cost raises some issues when scaling up is at stake. Finding ways to reduce these costs—through potentially a diversified cheaper teaching force—without putting at stake quality is to be looked at.

TABLE B14.1.

PARAMETERS ENTERING INTO THE SETUP OF PUBLIC (RECURRENT) SPENDING PER PUPIL, BY EDUCATION LEVEL, 2013

	PRE-PRIMARY	PRIMARY	POST-PRIMARY	SECONDARY	TVET (SHORT PROGRAMS)	TVET (LONG PROGRAMS)
Pupil-teacher ratio	28:1	54:1	90:1	38:1	17:1	12:1
Pupil-non-teaching staff ratio		427:1	176:1	153:1	35:1	44:1
Mean salary – teacher (CFAF)	1,768,516	1,664,405	2,858,943	3,276,254	3,066,462	3,217,154
Mean salary – non-teaching staff (CFAF)		1,664,405	2,696,045	2,737,504	2,776,277	2,825,515
Other than staff salary recurrent spending per student – school level (CFAF)		36,264	11,723	26,180	120,967	148,431
Enrollment in public schools	12,869	2,059,856	373,215	67,193	2,463	6,000
Public spending by student (CFAF)	91,925	71,196	58,873	131,299	386,672	475,075

Source: Burkina Faso 2017.

BOX 15.

ECE-SPECIFIC TOOLS TO ASSESS UNIT COSTS OF VARIOUS ECE PROGRAMS FROM THE PROVIDER PERSPECTIVE

Weak ECE financial planning, partly linked to lack of good data on cost and financing, has been widely recognized as one area of ECE policy planning most need of improvement. Indeed, countries need to know what is being spent on ECE interventions in order to adequately address financing issues (that is, supporting investments, estimating financial gaps and searching for other financial sources, improving the effectiveness of current spending for ECE) (Putcha, Upadhyah and Burnett 2016; Gustafsson-Wright and Boggild-Jones 2018). Furthermore, inadequate information on costs and the perceived high costs of delivering public ECE programs have tended to reduce investments from government, leading to greater reliance on the private sector and local communities.

Lack of adequate understanding of what types of interventions are working in specific settings, and at what cost, has been recognized as a major impediment for proper integration of ECE into ESPs, estimating the financial implication of scaling up, ECE services mobilizing an adequate level of financial resources and scaling up ECE programs (Atinc, Putcha and van der Gaag 2014).

While there has been much improvement on the costs of health interventions targeting young children, there is still limited data on the costs of other services equally critical for child development (including parent education, early cognitive stimulation and pre-primary education). In addition, very little evidence exists on good models that have been scaled up and still remain effective (Gustafsson-Wright and Atinc 2013). To fill this gap, organizations such as Pôle de Dakar-IIEP, UNICEF, Save the Children, World Bank, USAID Inter-American Development Bank, J-Pal and the Center for Universal Education (CUE) at Brookings have been working on developing ECE costing models to better understand the cost and financing for providing ECE programs at scale.*

Most approaches rely on the ingredients method developed by Levin and McEwan (2001). This method based on five practical steps consists of identifying the main inputs/ingredients required by each program (personnel, pedagogical material, transport, premises, health, nutrition, games and so on) to establish the real cost of each input on the basis of market prices or other cost estimates.† In this way, the overall and unit costs of the service can be determined as well as the respective contribution of the state, families, communities, NGOs and so on. The exercise is completed by the reconstitution of the overall cost by multiplying the unit cost of each service by the number of beneficiaries. To be comprehensive, one should add any coordination, administration and M&E overheads relating to central and decentralized management, be it public or private.

The CUE at Brookings and J-PAL provide costing tools available online:

- Standardized Early Childhood Development Costing Tool – SECT. The CUE at Brookings and the World Bank have developed a costing template to be used as a standard system for compiling cost data for ECE interventions; it is expected to be used in the construction of a comparative cost database and to evaluate the cost-effectiveness of programs (Gustafsson-Wright, Boggild-Jones and Gardiner 2017). <https://www.brookings.edu/wp-content/uploads/2017/09/standardized-ecd-costing-tool.pdf>

- J-PAL costing guidelines and template. J-PAL has designed a costing tool to support the collection of cost data in a robust way to conduct cost-effectiveness analysis (CEA) and provide advice to policymakers on how they might best allocate limited budget resources. <https://www.povertyactionlab.org/research-resources/cost-effectiveness>

* Gustafsson-Wright and Boggild-Jones (2018) provide an overview of existing costing models.

† It is also common in such exercises to annualize the cost of infrastructure and apply depreciation rates to equipment. Volunteer work, in-kind contributions and gifts should be costed on the basis of local going market rates.

3.4 Resource management

Once an overall picture of access and quality has been drawn, it is important to analyze how key resources—especially those identified as being linked to quality and learning outcomes—are managed. Effective management of a quality pre-primary subsector concerns

1. How pre-primary provision is managed at different levels, at both central government and local levels; and
2. How key resources are managed and used (including teacher management practices, and the functioning of monitoring and quality assurance mechanisms).

3.4.1 Management of teachers and other personnel

An analysis of the management of teachers and other ECE personnel is critical because they are essential to the learning process and their salaries and wages constitute most of the pre-primary budget.²⁵ The management analysis looks at the recruitment process as well as the posting of teachers to specific schools, absenteeism and job satisfaction. Here again, keeping an equity lens will be an important dimension to consider.

²⁵ See the *ESA Methodological Guidelines*, volume 2, chapter 7, section 5.1 (on the quality of ECD service); and volume 1, chapter 4, section 3 (on teacher management). See also Core Function 3, on competent, committed pre-primary teachers and other personnel, in the UNICEF 2019 *Conceptual Framework*.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • What is the level of pre-primary unit cost? What is its evolution over time? How does it compare with the unit cost in other countries? How does it compare with other subsectors? • What is the relative importance of each of the main factors affecting the pre-primary unit cost (e.g., average teacher salary, PTR, percentage of recurrent expenses other than teaching salaries) and their evolution over years? How do pre-primary public unit costs decomposition compare with those of other subsector? • How does the decomposition of the unit cost inform efficient service delivery of ECE moving forward? 	<p>Estimate education unit costs (recurrent spending by pupil) for each education level, and evaluate the respective importance of the three main factors of unit costs (average teacher salary, the pupil-teacher ratio and the percentage of recurrent expenses other than salaries). The latter will allow you to estimate how many teachers would be required and how much it would cost to reach a specified PTR. These micro estimations of public unit costs enable one to easily develop an analytical approach to the determinants of public spending and to carry out straightforward simulations based on the anticipated future variations of these factors.</p> <p>Use available data from government budgets and expenditures already incurred, accounts of local authorities (usually assembled centrally by the finance ministry or ministry responsible for local authorities), accounts kept by schools themselves (when they exist), and any existing statistical surveys (such as contributions made by families and parents' associations, fees charged by private schools and household expenditures).</p>

BOX 16.

COUNTRY EXAMPLE: PRE-PRIMARY TEACHER DEPLOYMENT CONSISTENCY ACROSS PUBLIC PRE-PRIMARY SCHOOLS IN CÔTE D'IVOIRE

The analysis of the consistency of the posting of ECE teachers throughout a country is a fundamental management issue, being linked to the principle of equity in learning conditions that would have the number of teachers in a school be proportional to the number of students. Thus, all preschools with approximately the same number of children should have a comparable number of ECE teachers.*

The figure below gives a glimpse of the situation of the coherence of ECE teacher allocation to public pre-primary schools in Cote d'Ivoire by plotting information related to ECE enrollment (x axis) and ECE teacher numbers (y axis).†

The expectation would be that the preschools with more children have a larger number of ECE teachers. This is partly the case, the R^2 amounting to 0.45. This nevertheless implies a high degree of hazard (55 percent) in the allocation of ECE teachers to preschools (that is, in 55 percent of the cases ECE teachers are allocated to pre-primary school based on criteria other than the number of children enrolled in the pre-primary schools).

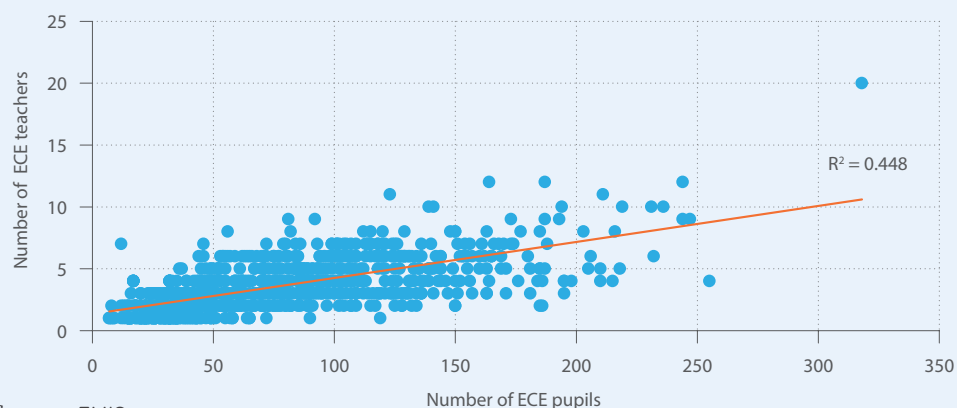
* To evaluate the consistency in the posting of teachers at the national level, the R^2 determination coefficient is generally used. The value of this coefficient is between 0 and 1: the closer to 1, the greater the relation between the number of students and the number of teachers. Conversely, R^2 's complementary coefficient ($1-R^2$, usually called the degree of randomness) measures the share of teacher postings that are explained by factors other than the number of students in a school. The greater the degree of randomness, the greater the inconsistencies in teacher posting.

† The data used in this example are drawn from the Ministry of Education planning service's 2012/13 statistical database. The allocation of teachers only covers government pre-primary schools as these are the only ones financed by the state.

Source: Côte d'Ivoire 2016.

FIGURE B16.1.

RELATION BETWEEN THE NUMBER OF PUPILS AND THE NUMBER OF ECE TEACHERS IN PUBLIC PRE-PRIMARY SCHOOLS, 2012–2013



Source: EMIS.

Note: Each dot is a pre-primary school.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • What are the needs for recruitment of ECE teachers? • What are the qualification requirements to become a pre-primary teacher? How many teachers meet these requirements? • Is there a comprehensive recruitment strategy for pre-primary staff? Are there mechanisms identified to attract new talent to the profession? • Are pre-primary teachers assigned to schools on a logical basis depending on the size of enrollments? How does it compare to that of primary teachers? • What is the level attrition rate among ECE teachers (a proxy for professional satisfaction)? • What is the remuneration of pre-primary teachers? How does it compare to that of primary teachers and other professions of similar qualifications in GDP per capita? • is there a gender pay gap? • Is there a retention strategy for pre-primary staff? Do pre-primary teachers have opportunities for career development and advancement, progression and mobility? • Are there gender disparities in career development and advancement? 	<p>Review existing ECE human resource policies and compute key indicators (such as the coefficient of correlation (R^2),²⁶ PTR, pre-primary, teaching contact hours, ECE teacher salary as a share of GDP per capita, teacher satisfaction level, ECE teacher attrition rate) using the EMIS, payroll data and any existing ECD center-level surveys. Data on pre-primary teachers contact hours and job satisfaction are still very limited in many countries. Even if such information is available in schools, known to inspectors, or accessible in the subregional administration, it is not systematically fed into the regional and/or national levels. Specific surveys might be carried out to address those issues.</p> <p>Equity analysis: Also compute the indicators based on different regions or locations in the country and by different service providers (public, private, NGO, FBO, etc.) to highlight and identify possible disparities.</p>

²⁶ The R^2 —coefficient of correlation—is used to assess the degree of coherence in the posting of teacher to schools.

BOX 17.

COUNTRY EXAMPLE: MONITORING AND QUALITY ASSURANCE IN MOZAMBIQUE

"In 2018, MINED (Ministry of Education and Human Development) developed school quality framework focusing specifically on primary education. The framework identifies eight quality standards with nineteen indicators distributed in three dimensions or key areas. (i) Planning, Administration and School Management, (ii) Infrastructure, Equipment and School Environment, and (iii) Teaching Learning Processes. The standards include indicators and tools for supervision. The DICIPE project (community-based preschool pilot project) has developed quality standards, but it lacks some key elements. The MGCAS (Ministry of Gender, Child and Social Action) has also developed quality standards for community-based preschools. However, those standards also lack some key elements. Associated tools have been developed with the standards developed by both MINEDH and MGCAS but based on their respective programs.

"Supervision is not robust and supervision data are not analysed to inform school improvement and needed interventions. Schools are also not receiving feedback from supervision visits to inform improved practices of teaching and learning.

"Prior to the passage of the 2018 revised Education Law, the Ministry of Gender and Social Action developed service delivery standards for 0–5 years and the Ministry of Education also developed standards for preschool 3–5. Both standards are without indicators and not comprehensive enough, for example, standards on philosophy of care, transition, enrolment, special needs and family and community engagement. There exists duplication in monitoring activities and limited regulations and quality assurance to measure service delivery of preschool service providers."

Source: Mozambique, Ministry of Education and Human Development 2019.

3.4.2 Monitoring and quality assurance mechanisms

In the pre-primary subsector, monitoring and quality assurance can play a crucial role in promoting better services and child outcomes: assuring that standards and regulations are followed, resources are being used in an efficient manner and that children receive appropriate care and education; keeping track of workforce supply and conditions; or surveying parent satisfaction.²⁷ Systematic quality assurance processes are therefore crucial not only for accountability purposes but also for policy design to ensure that such policies are responsive to the needs of the national and local contexts.

²⁷ See the UNICEF 2019 *Conceptual Framework*, Core Function 5, on monitoring, regulation and quality assurance of pre-primary service. See also the *ESA Methodological Guidelines*, volume 2, chapter 7, section 1.2 (on political and institutional arrangements). The SABER-ECD guidelines are also very instructive.

In ECE, quality assurance typically includes components such as program quality standards, monitoring systems, observations of classroom practices, data-driven supports for program quality improvement and management of the overall quality assurance system. It also includes characteristics of pre-primary settings, such as safety, group size, infrastructure and equipment, and more. Here again, an equity lens should be included as an important consideration in monitoring and quality assurance.

SOME GUIDING QUESTIONS	ANALYTICAL CONSIDERATIONS AND POTENTIAL DATA SOURCES
<ul style="list-style-type: none"> • Have ECE quality service standards been established? Is the effectiveness of quality standards reviewed regularly? • Are there standards for children-staff ratios, the number of children per group, the space per child, feeding programs, staff qualifications and remuneration, program duration and/or children’s achievements in relation to early learning and development (ELDS)? • Are service quality standards applicable across all providers (with adaptations as needed)? • Are norms and standards enforced? What public institution is responsible? • Is quality assurance based on inspection or certification/accreditation? • Is there ongoing ECE program monitoring and evaluation? Does this include monitoring of child development or learning outcomes? • Are there sufficient human and financial resources to support effective monitoring of quality? 	<p>Review existing documentation on ECE program standards, and accreditation and inspection procedures, as well as monitoring or quality assurance reports and SABER ECD country reports if available.</p>

4.

MOVING FORWARD

This module has examined key aspects of conducting an ESA with a particular focus on incorporating an analysis of the pre-primary subsector. The main challenges in this regard are incorporating information from the multiplicity of ECE actors (government, private sector, FBOs, NGOs and more) and the paucity of data in many countries about all aspects of pre-primary education, from access and equity to quality, management and availability and use of resources. As countries prioritize pre-primary, including incorporating it into ongoing planning processes, these data issues would ideally diminish over time as the education management information system improves and is strengthened. Here, we offer a few suggestions for how to move forward with an ESA in light of some of the constraints that may exist.

Use the ESA to flag information and analytical gaps to be tackled during ESP implementation.

The data collection and analysis phases present a good opportunity to assess what data and information exist, their characteristics (coverage, quality, periodicity and relevancy), and what data are missing. In general, striking a balance between the quantitative aspect of ESA and a more qualitative analytical approach should be pursued to construct a more comprehensive picture of the subsector and the nuances in supply/demand issues, implementation and service delivery challenges, and so on. It is also a chance to discuss with relevant stakeholders strategies to come up with quality and relevant information and analytical frameworks in the short, medium or long term, including by making better use of and strengthening existing data collection and M&E mechanisms (see also Module 5 on M&E). Such an assessment and discussion can feed into the capacity gap analysis on aspects related to data collection, analysis and reporting processes, and provide recommendations for improvements that may ultimately be incorporated into ESP priorities.

Anticipate/prioritize pre-primary data needs to reduce time pressure.

The current tendency to shorten the time frame for both ESA and ESP preparation entails greater reliance on existing analyses and evidence, which is a greater challenge in relation to pre-primary, where data are more likely to be lacking. This calls for critical analyses to be conducted before the planning process begins to ensure results are available from the start and can be fully integrated within the regular ESA/ESP processes.

Bring needed external expertise to foster a capacity development approach while helping address complex analytical issues.

Given the technical nature of the work, and depending on the analytical capacities available at the country level within the government and its partners, it might be necessary and useful to bring in technical resources. It is important, however, to ensure that ESA development remains as participatory as possible and allows for a certain amount of transfer of skills by favoring a *learning by doing approach*—for example, by ensuring national participants are, as much as possible, involved in the data collection, analysis, write-up and reporting processes.

Carefully phase the consultation and ESA development process.

Consultation is a critical part of the ESA. Because of the many actors involved in early childhood education, ESA development should also incorporate a multisectoral national technical working team led by the education ministry (or other relevant authority with recognized leadership of the pre-primary subsector) and with representatives from any other ministries involved (for example, finance, health, or other), different arms/departments overseeing the different action areas (such as curriculum, teacher training, quality assurance, planning and more), NGOs, FBOs, academia, disadvantaged groups and minorities and others. In addition, a broad consultation phase during which ESA results are presented and which includes discussion sessions with a variety of stakeholders will allow for adequately incorporating stakeholders' views and properly finalizing the ESA.

LIST OF KEY INDICATORS TO SUPPORT ANALYSIS OF PRE-PRIMARY SUBSECTOR IN AN ESA

The presentation of the list of indicators follow the structure of the module.

1. National context and enabling environment

1.1 *Political, humanitarian, demographic and social context*

- Target population by pre-primary age group; number and % of total population (by gender)
- Share of the population living below the poverty line
- Urbanization rate
- Adult literacy rate
- HIV/AIDS prevalence rate
- Share of vulnerable children and orphans
- Infant mortality rate (per 1,000 live births)
- Child mortality rate (per 1,000 live births)
- Malnutrition (0 to 5 years) (prevalence of wasting, stunting, underweight and overweight %)
- Human Development Index

1.2 *Policy and legal frameworks*

- Type of constitutional provision related to pre-primary
- # and type of legislation related to pre-primary
- # and type of policies/policy statements related to pre-primary from relevant ministries

1.3 Ministerial leadership and capacity

- Existence of ministerial anchor for pre-primary
- % of lead ministerial staff with expertise in pre-primary
- Level of human and financial resources available for pre-primary (as per institutional analysis)

1.4 Macroeconomic and public financing frameworks

- GDP growth rate
- Domestic resources (central and local governments) and tax revenue as a % of GDP
- External resources (grants and loans) and external resources as a % of GDP
- Overall national budget allocated to pre-primary education across key ministries
- Education public expenditure and share of public expenditure allocated to education
- Pre-primary education public expenditure and share of education public expenditure allocated to pre-primary education
- Number and % of provincial (subregional or local) governments who allocate funds to pre-primary education
- Financial contribution of donors to pre-primary and other subsectors

2. Performances of the pre-primary subsector

2.1 Access and equity

- Pre-primary gross rates by sex, urban/rural, region, economic group, disability and other relevant characteristics
- % of children 1 year prior to school entry enrolled in (or attending) a pre-primary education program and by sex, location (urban/rural), region, economic group, etc.
- % of children enrolled in (or attending) programs by different providers—i.e., private, public, NGO-run, other relevant providers, and by sex, location (urban/rural), region, economic group, etc.
- % of children who have access to publicly funded or subsidized pre-primary education
- Share of children enrolled in pre-primary education by provision (public, private and community centers) and by location (urban/rural, region)

Other indicators:

- # of ECE centers/institutions and classrooms, by province/district and by ownership
 - # of provincial (or district/local) governments with a plan in place for pre-primary education
 - National or subnational initiatives to develop/strengthen national/subnational capacity in planning and management of pre-primary education programs
- 2.2 *Quality, effectiveness and equity (analysis should be disaggregated by sex, location, wealth, etc. when relevant)*
- Structural quality
 - Pupil-teacher ratio
 - Pupil-non-teaching staff ratio
 - % of classrooms with appropriate learning and teaching materials as per the curriculum disaggregated by provider and/or province/ district
 - Pre-primary teachers and personnel
 - % of trained pre-primary teachers
 - % of teachers who are trained to use the curriculum
 - % of pre-primary leaders (principles/supervisors) who are trained to implement or support the implementation of the curriculum
 - Number of actual teacher-pupil contact hours per week (and school year)
 - ECE curriculum
 - Existence of age, culturally and developmentally appropriate curriculum and learning materials
 - % of ECE centers that have a copy of the national pre-primary curriculum disaggregated by type of provider and/or district/province
 - % of ECE centers implementing the national pre-primary curriculum disaggregated by type of provider and/or district/province
 - % of ECE centers/schools that monitor and evaluate the implementation of the curriculum
 - Family and community engagement in pre-primary
 - % of pre-primary programs/centers that regularly communicate with families about the child's progress
 - % of pre-primary staff trained on family engagement and support

- % of children who have three or more children’s books
 - % of children who play with two or more types of playthings
 - Practice of stimulation activities at home indicators (MICS, MELQO, etc.)
- Effectiveness: The effects of pre-primary on school readiness
- % of children reaching key developmental milestones (MELQO, ISELA, ELA, etc.)
 - % of children developmentally on track in key domains of development (MICS indicator)
 - % of children who enter primary school at the right age (with ECE and non-ECE background) (proxy indicator)
 - % of pupils who repeat primary grade 1 (proxy indicator)
 - % of pupils who drop in primary grade 1 (proxy indicator)
 - Learning outcomes in primary (with ECE and non-ECE background) (EGRA, EGMA, PASEC, SAQMEC, etc.)

3. Cost and financing of pre-primary

3.1 Who is paying for education, and specifically pre-primary?

- Disaggregated public expenditures by nature: overall and by subsector, including pre-primary

Amount and %

** Recurrent expenditures*

Total teacher salaries and allowances

Total non-teaching staff salaries and allowances

Total expenditures on teaching and learning materials

Total expenditures on social expenditures (for example transfer to students and families, school canteen, etc.)

Other recurrent expenses (utilities, other administrative expenditure)

** Capital expenditures*

Total expenditures related to school construction, and major repairs

Land

- Household financial contributions to pre-primary education and other education subsectors (household surveys)—amount and as a % of total education expenditure

3.2 *How much does it cost per pupil?*

- Unit cost for ECE and other subsectors: global and disaggregated by components (e.g., PTR, PNTR, teachers' salary cost, non-teaching staff salary cost, other recurrent expenditures)

4. **Resource management**

4.1 *Management of ECE teachers and other personnel*

- Pre-primary teacher trend: # and % by status, gender, qualification and school type (in comparison with other subsectors)
- ECE teacher absenteeism rates (in comparison with other subsectors)
- ECE teacher attrition rates (in comparison with other subsectors)
- Degree of randomness in ECE teacher allocation (in comparison with other subsectors)
- Pupil-ECE teacher ratios and % of teacher qualified/trained by location (urban/rural) region/district and school type
- % of pre-primary staff who have received pre-service training, disaggregated by geographic area, location and other relevant factors
- % of pre-primary staff who have gone through practicum/fieldwork/in-classroom experience
- % of pre-primary staff who receive continuous professional development (e.g., courses/workshops) on an annual or regular basis
- % of pre-primary leaders (principles/supervisors) with relevant training
- # of teacher training institutions specializing in pre-primary teacher training disaggregated by geographic area, location and other relevant factors

4.2 *Monitoring and quality assurance mechanisms*

- % of providers that are officially accredited
- % of providers that meet the minimum quality standards disaggregated by provider and province/district
- % of providers that have annual quality self-improvement plans in place (relevant for some systems only)
- % of providers/programs regularly assessed to improve quality

- % of pre-primary schools included in EMIS
- # of specialized ECE inspectors disaggregated by province/district
- Frequency of inspections/supervisory visits, per teacher by province/district and preschool type
- Frequency of teacher contacts with other advisory bodies by province/district and preschool type
- Availability and location of teacher resource centres by province/district

PROS AND CONS FOR DEVELOPING A SEPARATE ESA PRE-PRIMARY CHAPTER VERSUS AN INTEGRATED ANALYSIS

Each country will handle the pre-primary subsector analysis differently, some as an integrated component within the sector analysis and some as a stand-alone chapter. The table below provides some examples of pros and cons for each option.

	PROS	CONS
Separate ESA chapter	<p>Allows making a stronger case for the subsector, enhancing its visibility.</p> <p>Allows presenting the various areas of analysis in a more coherent and comprehensive way.</p> <p>Makes the use of the various diagnosis tools easier, as it is not restricted to the “regular” ESA approach.</p>	<p>Brings redundancy and writing challenges, as many results relevant for pre-primary will have already been addressed in the main ESA report.</p> <p>Lengthens the whole report, making it less attractive for readers, including policymakers and implementers.</p> <p>Lack of data might make the case for a stand-alone chapter weak.</p>
Integrated ESA	<p>Looking at the subsector in isolation can weaken its argumentation, as many areas need to be looked at in comparison with other subsectors—i.e., cost per child, % of budget going to pre-primary, PTR, share of public enrolment, % of teacher trained, to name a few key aspects.</p> <p>Avoids redundancy in certain analyses, and shortens the document.</p> <p>When there is little data on ECE/PPE.</p>	<p>Some specific pre-primary issues might not fit well within the existing ESA format, such as aspects related to quality assurance mechanisms, curriculum, parents and community engagement, to name a few, and receive therefore less attention.</p>



COST AND FINANCING CONCEPTS

We present below some useful key concepts for tackling cost and financing of the education sector.

Costing

Costing is the process of establishing the unit cost of all items of educational expenditure, including teachers and the construction of classrooms. A full costing is needed to ascertain how much it will cost to implement the plan and all of the planned activities, including those related specifically to pre-primary.

Financing

Financing refers to the financial resources available to support plan implementation. They usually consist of domestic and external resources.

Expenditure

Recurrent expenditure refers to those expenditures that occur on an annual basis, such as salaries, textbooks, some teaching materials, electricity, water and gas supplies, and so on. Such expenditure relates to the regular running of the education system. Salaries of civil servants in active service absorbs a sizable share of recurrent expenditure.

Capital expenditure refers to those expenditures that cover the purchase of goods that yield benefits for more than one year, such as premises, equipment and furniture. The total amount of capital expenditures is generally divided into two categories: (1) the building of new, equipped classrooms, including ECE centers, and (2) other expenses of building and equipment, including major repairs. Maintenance of infrastructure (for example, classrooms) is usually including in recurrent expenditures.

Classification of expenditure by nature

Among the possible classifications of educational expenditure, the classification by *nature* of expenditure permits (a) an analysis of the composition of costs, and (b) the costs of the inputs necessary for educational activities. It also enables a planner to determine the respective shares of: (c) salaries, (d) other recurrent costs, and (e) capital costs.

The classification can be more or less detailed, depending on the data available and the purpose of the analysis. The main distinction is that between recurrent and capital expenditure.

Here is an example of classification by nature:

Recurrent expenses

Salaries (teaching personnel, administrative personnel)

Textbooks and teaching materials

Social expenditures (for example, transfer to students and families, school canteen)

Other current expenses (utilities, other administrative expenditure)

Capital expenditure

School construction, and major repairs

Land

Classification by level of education

A breakdown by subsector or level of education is important for a correct analysis of educational expenditure. Some activities, such as the work of the administrative departments of the education ministry, may not come under any particular level of education. An extra heading could be provided in the classification, or the underlying cost could be spread across the various subsectors.

HOUSEHOLD SURVEYS AND LEARNING ASSESSMENT TOOLS COMMONLY USED IN ESAs

Household surveys²⁸

The Living Standards Measurement Study (LSMS) is a household survey program housed within the World Bank's Development Data Group that provides technical assistance to National Statistics Offices (NSOs) in the design and implementation of multitopic household surveys. Since its inception in the early 1980s, the LSMS program has worked with dozens of statistics offices around the world in generating high-quality data, incorporating innovative technologies and improved survey methodologies, and building technical capacity. The LSMS surveys are generally nationally and subnationally representative in the countries of operations, with household education expenditure being a critical component of the topics covered in these surveys. The LSMS surveys follow pretty much the same standard across countries, notwithstanding country-specific data needs. <http://surveys.worldbank.org/lsms>

The Demographic and Health Survey (DHS) is the flagship program of the United States Agency for International Development (USAID) mandated to produce household survey data on topics such as population, health, and nutrition. Globally, the program operates in more than 90 countries and emphasizes the statistical capacity building of NSOs in the design and implementation of surveys, as well as data analysis. Though the focus of the DHS is on population, health, and nutrition, education is one of the modules covered—but while it captures information on individual members' school attendance within a reference school year, the education expenditure information might not be disaggregated by individual members. Moreover, education expenditure information might not be disaggregated into the desired minimum components as described in [Oseni et al. (2018)]. <https://www.dhsprogram.com/>

Household Budget Surveys (HBSs) are nationally representative household surveys with a focus on consumption expenditure. For most low- and middle-income countries, HBS is the main data source for poverty estimation and consumer price index weights calculation. The periodicity of this survey varies across countries in terms of frequency, timing, content, and structure. While this survey provides valuable information on household-consumption expenditure, education expenditure is mostly at the household level, with less focus on individual members' school attendance.

28 All text under "Household surveys" extracted from Oseni et al. (2018).

Multiple Indicator Cluster Surveys (MICS) are an initiative of UNICEF to collect data on women and children. The initiative, which was first launched in 1995 and implemented in more than 60 countries, now has about 5 to 6 rounds of survey data, depending on the country. UNICEF provides financial, technical, and methodological support, while the NSOs conduct the survey, ensuring strong collaboration and national ownership of the collected data. MICS surveys provide no data on education expenditures; however, in the sixth round of MICS, the education module contains questions about education-related social transfers received by households. <http://mics.unicef.org/>

Global and regional early learning assessments initiatives

Measuring Early Learning Quality and Outcomes (MELQO) stems from a joint effort by UNESCO, UNICEF, World Bank and the Brookings Institution (with links to GPE and UIS).²⁹ The instruments draw from existing assessments and knowledge and rely on parent/teacher reports and direct observations. They cover both child development (assessing socio-emotional, early literacy and math, and executive function/approach to learning domains) and the quality of settings, thus linking the two concepts. They are affordable (open source) and feasible while offering comparable measures across countries. These measurements are reliable and valid, having been field-tested and widely peer-reviewed (Devercelli, Raikes and Anderson 2015). <http://ecdmeasure.org/>

International Development and Early Learning Assessment (IDELA), developed by Save the Children, consists of play-based assessment designed for the 3–6 age group; covering five developmental domains and aspects of executive functions (for example, motor development, emergent language and literacy, emergent math and numeracy, socio-emotional development). The instrument is available in many languages, without the emphasis on continuous scoring over yes/no responses. The tool is easy to administer and relevant for various settings (home, ECD centers, schools and elsewhere). A training manual is available to help standardize the administration between countries (Borisova 2015). <https://idela-network.org/>

Early Childhood Environment Rating Scale (ECERS) is a comprehensive observation-based instrument that assesses group programs for preschool-kindergarten children, ages 2–5, by analyzing both structural and process aspects (for example, environment, activities, schedule, interactions). Their scale matches the goals of most ECD centre-based programs and child development and learning outcomes. They are relatively easy to adapt across countries, and while having been used mainly in Western settings, they have also been used in low-income locations. Save the Children has been using and adapting the ECERS instrument and has linked it with child competencies assessment (IDELA) to analyze the link between quality of program and child outcomes (Borisova 2015). <https://ers.fpg.unc.edu/early-childhood-environment-rating-scale-ecers-r>

Early Learning Assessment (ELA), developed by UNICEF WCARO, consists of a school-based assessment based on direct testing, teacher reports of children in early learning competencies (for example, cognitive, motor, executive function, language/communication and socio-emotional skills) upon primary school entry. The tool has evolved to include instruments to assess the quality of existing preschool services (tackling structural, organizational and logistical educator and program dimensions) and their related costs, allowing researchers to come up with the costs and the effectiveness of various preschool models. The instruments

²⁹ Under the technical leadership of Abbie Raikes.

have been widely used in West and Central Africa to support the development of ECD policies. They are easy to administer: User-friendly guidelines have been developed to ease their use (UNICEF 2015b).

Early Development Instrument (EDI) was developed at the Offord Centre for Child Studies at McMaster University in Hamilton, Ontario, Canada, with the objective of creating a practical measurement instrument to monitor children's holistic developmental health in the school climate before grade 1. The EDI consists of a checklist of 103 items measuring children's development health at school entry in the five development areas of physical health and well-being, social competence, emotional maturity, language and cognitive development, and communication skills and general knowledge. Additionally, the EDI can gauge a child's level of readiness for learning in a school environment. The instrument has been widely used in Canada and Australia, and has been used by more than 20 countries including in low- and middle-income settings (Janus and Reid-Westoby 2016). <https://edi.offordcentre.com/>

East Asia Pacific Early Child Development Scales (EAP-ECDS) was developed by the Early Childhood Development, Education and Policy Group, Faculty of Education, and The University of Hong Kong,³⁰ based on the most frequently used indicators from the Early Learning Development Standards (ELDS) from seven countries in the East Asia and the Pacific region to provide stakeholders across the region with a shared measurement tool to evaluate the holistic development of children 3–5 years old. The EAP-ECDS covers seven sectors, including cognitive development; socio-emotional development; motor development; language and emergent literacy; health, hygiene, and safety; cultural knowledge and participation; and approaches to learning (ARNEC website).

Regional Project on Child Development Indicators (PRIDI), established by the Inter-American Development Bank (IDB), aims to produce quality data on the development of children ages 24–59 months that can be compared across a regional level. The instrument covers four domains (cognition, language and communication, socio-emotional, and motor) as well as contextual factors (related to child, household, community, early education programs) associated with ECD. Questionnaires and manuals including sampling guidelines (in Spanish) are open source, available on the IDB website. The PRIDI offers a package of tools, analysis and data intended to promote policy dialogue and collaborative efforts between governments on how best to address and improve the needs of young children in the region (Verdisco et al. 2014). <https://www.iadb.org/en/sector/education/pridi/home>

Global and regional primary-level assessments

Early Grade Reading Assessment (EGRA) and Early Grade Mathematic Assessment (EGMA) consist of nationally representative surveys of children's reading and math abilities in grades 1, 2 and 3 of primary, to inform education practitioners and policymakers of the quality of learning at school. EGRAs generally evaluate children in eight areas: letter name knowledge, phonemic awareness, letter sound knowledge, familiar word reading, unfamiliar non-word reading, passage reading and comprehension and dictation. EGMAs evaluate children on six

³⁰ The project was initiated and managed by the Asia-Pacific Regional Network for Early Childhood ARNEC with support from UNICEF East Asia and Pacific Regional Office (UNICEF-EAPRO) and the Open Society Foundation, and implemented by the University of Hong Kong (HKU) in collaboration with several participating countries in the region.

levels: number identification, number discrimination, missing number patterns, addition, subtraction and word problems. <https://shared.rti.org/sub-topic/early-grade-reading-assessment-egra> and <https://shared.rti.org/sub-topic/early-grade-math-assessment-egma>

CONFEMEN Education Systems Analysis Program (PASEC). The PASEC assessment consists of passing reading and mathematical tests on a representative sample of pupils in the second and fifth years of primary school. <http://www.pasec.confemen.org/>

Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) measures Standard VI pupils' performance in reading and math. SACMEQ uses standardized methods/tests that allow for geographic (both cross-country and national) and historical comparisons. Another interesting feature of SACMEQ data is that student skill levels can be assessed. There are eight skill levels for each subject area. Levels are hierarchical and enable to assess the competencies that the students have or have not acquired.

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