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MAKING COSTS COUNT: HARMONIZED STANDARDS FOR GENERATION AND USE OF COST EVIDENCE IN GLOBAL EDUCATION AND ECCE

A collective output of the **Global Costing Taskforce for Education and ECCE**

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Introduction

This guidance note aims to put forward a harmonized set of standards for the generation, analysis, reporting, dissemination, and use of cost evidence in the global education sector. For the purposes of this note, the term **education sector** is used broadly for simplification to include early childhood development, care and education (ECD/ECCE), primary and secondary education (K–12), technical and vocational education and training (TVET), youth development and nonformal learning programs, tertiary and higher education, and related education support services and systems. This definition reflects the understanding, widely used in international development practice, that learning and human development occur across the life course and through multiple formal and nonformal delivery platforms.

Over the past decade, the amount of cost-related work in the sector has grown significantly, driven by increased demand from governments, donors, researchers, and implementing organizations for evidence that can support more effective and equitable use of limited resources. At the same time, the field has become increasingly fragmented, with different organizations using different terminology, methodologies, reporting standards, and analytical assumptions. This makes it difficult to compare findings across studies, interpret evidence consistently, or build cumulative knowledge that can guide policy and investment decisions. This note seeks to address these challenges by synthesizing lessons from the existing literature and field work and proposing a practical framework for harmonized costing standards that can be adapted across diverse contexts and use cases. The effort builds on a broad ecosystem of existing guidance documents and methodological resources while recognizing the need for greater consistency and coordination across the sector.

The development of this note has been informed not only by published guidance and methodological literature, but also by an extensive consultative and consensus-building process undertaken through the Global Costing Taskforce for Education and Early Childhood Care and Education (ECCE) convened by the Brookings Institution's Center for Universal Education. The Taskforce was established to strengthen the availability, quality, comparability, and use of cost data across education and ECCE sectors globally. Its work brings together governments, donors, researchers, practitioners, and technical experts from across regions and disciplines to develop shared approaches and reduce duplication of effort. Central priorities of the Taskforce include harmonizing costing terminology and standards, strengthening institutional capacity for costing work, improving transparency and publication practices, and increasing the use of cost evidence in real-world decisionmaking. This note should therefore be understood not as a standalone technical document but as part of a broader collaborative effort to strengthen the role of cost evidence in improving education and ECCE systems worldwide.

The primary audience for this note includes decisionmakers and funders, researchers and evaluators, and implementing organizations involved in designing, financing, studying, or delivering education and ECCE programs.

For policymakers and funders, the note aims to support more informed decisions about resource allocation, affordability, sustainability, efficiency, and scaling of education policy reforms as well as temporary interventions, such as donor-funded programs.

For implementing organizations, it offers practical guidance for integrating costing into program planning, implementation, monitoring, and learning processes.

For researchers and evaluators, it seeks to promote methodological clarity, transparency, and comparability across cost studies pertaining to policy reforms as well as education programs.

The note is organized into seven sections. It begins by explaining why stronger cost evidence matters in the context of the global learning and development crisis and growing resource constraints and how different categories of stakeholders can benefit from its improved quantity and quality. It then proposes a harmonized set of key concepts and terminology, followed by guidance on the costing process itself. Subsequent sections address standards for data collection, data analysis, reporting and publication, and dissemination best practices. Together, these sections aim to support a shared foundation for generating and using cost evidence that is rigorous, practical, transparent, and useful across a wide range of global education and ECCE contexts.

Why measure costs of education and ECCE programs?

Education and early childhood systems around the world are under enormous pressure, being asked to do more with reduced resources in increasingly uncertain political and economic conditions. Millions of children are in school but are still not learning the basic skills they need to thrive (UNESCO, 2024). The COVID-19 pandemic made this situation even worse, widening existing inequalities and disrupting learning for an entire generation of students (World Bank, 2022). Progress toward Sustainable Development Goal 4 (Quality Education) remains far too slow, especially in low- and middle-income countries (UNESCO, 2025). Early childhood development systems, which include the education sector as well as the social protection and health sectors, face similar challenges: demand is growing, resources are stretched, and too many children still lack access to quality services during the years that matter most for brain development and lifelong learning (World Bank, 2024). In particular, disadvantaged groups such as linguistic, religious, and ethnic minorities, children with disabilities, learners in remote and climate-vulnerable settings, and girls may not receive adequate educational services and supports due to insufficient resourcing (World Bank, 2022). In this environment, good intentions are not enough.

Decisions about programs and investments need to be guided by strong evidence—including evidence about their overall costs as well as the cost per beneficiary. Cost evidence helps answer practical questions that decisionmakers routinely face, such as:

- How much does an education intervention, program, or policy cost to deliver? How much would it cost to scale it up?
- Which parts of a program are driving the expense? Can delivery be made more efficient?
- Could the same results be achieved at a lower cost through a different approach?

These questions matter because governments and organizations are trying to improve learning outcomes while managing teacher shortages, competing priorities, and uncertain funding. At the same time, education systems are faced with the rapidly changing education landscape due to technology-driven expanded opportunities as well as increased pressures due to accelerating climate change and social, political, and economic upheavals. When resources are scarce, every investment matters, both at a policy level and when implementing specific interventions. With the adoption of impact measurement throughout the sector over the past 20 years, we now have much better information about effectiveness of different approaches and interventions. However, without accompanying cost data, impact data alone is not as helpful for informing investment decisions.

Better cost information, in addition to impact data, helps ensure that money is spent in ways that produce the greatest possible benefit for children and communities, including

marginalized and disadvantaged learners. Knowing how much it costs to achieve a given result in a specific context for a specific population of learners allows decisionmakers to compare options and make smarter choices. Cost analysis can help establish what resources are needed to implement a program with fidelity, weigh trade-offs between alternative programs, and assess costs against the effectiveness of different approaches. It is the difference between knowing that a program *works* and knowing that this specific program is the *best investment* compared to alternatives.

Despite a clear value in including cost considerations in decisionmaking, governments, funders, and implementers often cannot identify cost-effective investments because the data required to accurately measure costs are frequently absent. Even providers of education services have difficulty untangling the costs of their own programs as they do not have staff trained to carry out costing work. At a policy and funding decisionmaking level, discussions still focus heavily on activities and outcomes without asking what it takes financially to sustain or scale those efforts over time and what programs can provide the best results for most learners. The result is that decisions about which programs to fund, scale up, or cut are far too often based on guesses rather than evidence.

While the attention to cost evidence in education has grown considerably over the past decade, data collection metrics and analysis methods are not yet standardized. The field has a growing body of cost estimates to draw from and the methodological tools to generate and use new cost evidence. However, without a sector agreement on standardized approaches, it is difficult to compare results across different cost studies. Additionally, trained analysts remain scarce, and decisionmakers rarely request this kind of information as a routine part of program planning and evaluation.

That gap between the tools that exist and their uptake in practice is what this document aims to help address. It puts forth practical guidance on how to make decisions throughout the costing process and directs analysts to relevant resources. Clear standards and shared approaches can make costing work easier, more consistent, and more useful for everyone involved. Adherence to shared standards can also help build trust in the evidence itself, making cost information a normal and expected part of planning, budgeting, and policy conversations rather than an afterthought.

New technologies are making this work easier than ever before. Digital tools can simplify data collection, reduce paperwork, and speed up analysis. Advances in artificial intelligence also create opportunities to organize information faster, identify patterns across large datasets, and reduce the time and cost required to produce useful analyses. These technologies will not replace careful consideration and judgment, but they can make high-quality cost evidence more accessible to organizations that previously lacked the time, funding, or technical expertise to produce it.

What will be needed next is a shared commitment to using these standards consistently, across funders, implementers, researchers, and governments alike. Whether you are a researcher designing a study, a funder reviewing a proposal, a government official allocating a budget, or an implementer trying to understand whether your program is delivering value, this document will help you. Cost evidence is not a technical luxury reserved for academics. It is a practical tool for anyone who wants to make the most of every dollar spent on educating the world's children.

Harmonized set of key concepts

Clear and consistent terminology is essential for strengthening the quality, comparability, and usefulness of cost evidence in global education and early childhood development. Cost studies are increasingly used by governments, donors, researchers, and implementing organizations to guide decisions about program design, efficiency, scale-up, financing, and sustainability. Yet the same terms are often used differently across studies, sectors, and organizations. In some cases, differences reflect legitimate methodological choices; in others, they create confusion that makes findings difficult to compare or interpret.

Establishing shared terminology serves a practical purpose: It helps ensure that cost evidence is transparent, interpretable, and actionable for all audiences. Without conceptual clarity, stakeholders may believe they are discussing the same type of evidence when they are in fact relying on different assumptions, definitions, or analytical approaches. The following section identifies key terms commonly used in cost evidence generation and highlights areas where broad consensus exists as well as areas where definitions remain contested or inconsistent across the literature.

Through a collaborative, consultative process with the Global Costing Taskforce, terms that were identified as having a plurality of definitions were discussed and harmonized. All stakeholders involved in generating, interpreting, funding, and using cost evidence are encouraged to adopt and consistently apply the finalized terminology presented below. Greater consistency in language will strengthen the credibility, comparability, and practical usefulness of cost evidence across the global education and early childhood development sectors. Though clear terminology alone will not solve all methodological challenges in cost evidence generation, it does provide an essential foundation for stronger practice.

Table 1 presents key concepts; the complete glossary of terms is found in Annex B.

TABLE 1

Key terms in cost evidence generation

Term	Definition
Activity-based costing (ABC)	Costing methodology that traces resources to program components ("activities") and then assigns the costs of those activities to outputs, outcomes, beneficiaries, or other cost objects based on their actual or estimated use, as defined by the project theory of change or logical framework.
Budget	Financial plan that estimates the resources and expenditures required to implement a program, activity, or reform over a specified period of time. Budget is a projection of future financial costs incurred by an organization, government, donor, or household.
Cost	Economic value of all resources—financial and non-financial, purchased and contributed, public and private—expended to implement a program. It can include cash expenditures, the value of in-kind contributions, and the opportunity cost of resources diverted from other uses. Cost is always defined relative to a stated perspective and a clearly specified program or intervention. The economic cost is distinguished from financial cost, which is the actual expenditures or monetary outlays incurred by an organization, government, donor, or household.
Cost analysis	Systematic analysis and interpretation of cost data to answer specific programmatic, research, or policy questions. It is a necessary first step in any economic evaluation but is itself distinct from analyses that also compare costs to outputs or outcomes.
Cost capture	Systematic process of collecting all cost data—financial and non-financial—during the implementation of a program, organized according to a predefined structure.
Cost category	Standardized grouping of costs by type, such as personnel, training, transport, infrastructure, or materials.
Cost-benefit analysis (CBA)	Economic evaluation method that converts both costs and program outcomes into monetary values, enabling a direct comparison of what is spent against what is gained.
Cost-economy analysis	Process of systematically identifying, recording, and documenting all relevant costs associated with a program or intervention.
Cost-effectiveness analysis (CEA)	Economic evaluation method that compares costs of a program relative to outcomes achieved, where outcomes are measured using a credible counterfactual.
Cost-efficiency analysis	Cost analysis method that calculates the cost of producing a unit of program output—for example, the cost per teacher trained or the cost per child enrolled.
Economic evaluation	Economic evaluation is the systematic comparison of the costs and impacts of two or more alternative courses of action, undertaken to assess and compare their relative value and inform decisions about the allocation of resources. Cost-effectiveness and cost-benefit analyses are examples of economic evaluation.
Expenditure	The amount of money spent to develop and/or implement an education program, as recorded in accounting or financial reporting systems.

TABLE 1

Key terms in cost evidence generation (continued)

Term	Definition
Ingredients	All resources that are required to produce an educational intervention, including labor, materials, equipment, facilities, and time.
Ingredients method	Costing approach that identifies all resources required to implement a program, estimates their quantities, and assigns monetary values to them based on extant data.
In-kind contributions	Goods, services, labor, or other non-cash resources that are donated or provided at below-market rates by governments, communities, families, or other parties, and which therefore do not appear as expenditures in a program's financial records.
Perspective	The standpoint from which costs are counted in an analysis. Because different stakeholders bear different costs, the same program can produce different cost estimates depending on the perspective chosen. Common perspectives include the implementer or provider, the funder or donor, the government, the program participant or family, and society as a whole.

Cost measurement framework

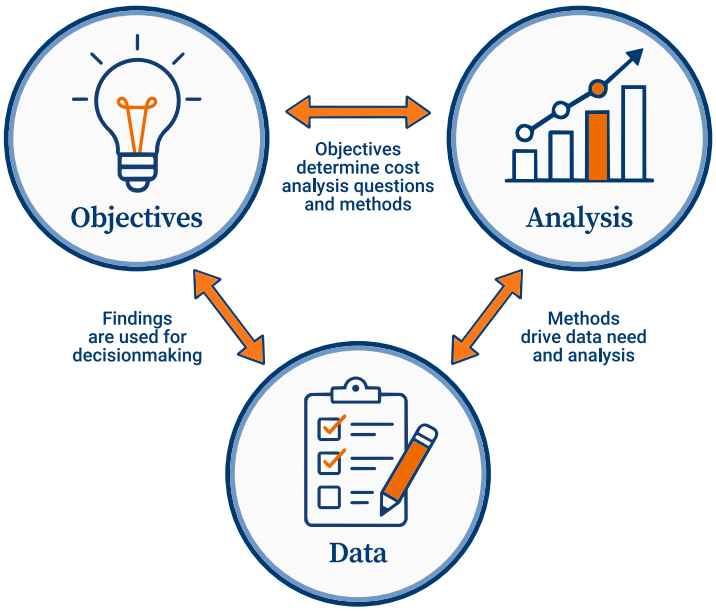
Costing process

Strong cost evidence does not begin with spreadsheets or data collection tools. It begins with a decision. The decisionmaker could be a government official, an officer in a funding agency, or a practitioner in an implementing organization. Should a program be expanded? Is a new intervention affordable? Are the resources used efficiently? Which approach produces the greatest benefit for the resources invested? Can a successful pilot realistically be implemented on a national scale?

The costing process should therefore always begin by clearly identifying the objective: what exactly needs to be decided, by whom, and for what purpose. For example, rather than asking "How much does this intervention cost to deliver?" it is helpful to ask, "What are the additional resources needed to deliver this intervention through existing government systems?" This clearly connects the question to the objective of establishing what level of additional funding would be needed to deliver the intervention. Without this clarity, costing exercises can easily become disconnected from the real-world decisions they are meant to inform.

FIGURE 1

Cost Measurement Framework



Once the decision objective is clear, it must be translated into a set of focused cost questions. Different objectives require different kinds of information. A ministry of education deciding whether to scale a literacy intervention may need to know the projected cost per student at national scale. A donor comparing several early childhood development models may want to understand cost-effectiveness across interventions. An implementing organization may need to identify the main drivers of program costs to improve efficiency. Defining these questions early is essential because they shape every step that follows (Figure 1)[1].

Cost analysis is not about collecting and analyzing every possible financial detail; it is about using the right data to answer clearly defined questions. In some cases, this means estimating the cost of designing, evaluating, and delivering a program. In others, however, the cost study objectives may only require the inclusion of the costs of program delivery. When adapting an intervention for a new context, for example, elements such as curriculum modification, stakeholder consultations, pilot testing, or implementation research may need to be included in the cost analysis. This could be the case when, for instance, assessing a transition from in-person teacher coaching to virtual support which may require estimating one-time technology investments, platform development, staff retraining, and transition costs, while excluding costs that would no longer be incurred under the new model. Cost analysis should therefore identify and cost out those resources that are necessary to answer the specific policy or implementation question.

The cost questions determine which analytical methods are appropriate. A study focused on estimating implementation costs may require a different approach from the one comparing cost-effectiveness across interventions or projecting long-term program affordability at scale. Decisions about methodology should therefore flow directly from the intended use of the evidence and the questions asked. This step is critical because methodological choices influence how costs are defined, whose perspective is considered, which assumptions are made, and how results are interpreted. Choosing methods without first clarifying the questions can produce findings that are technically correct but practically unhelpful.

Once the objectives are defined and an appropriate methodology is selected, it becomes possible to determine what data are needed. Some analyses require detailed information on intervention ingredients (personnel time, needed infrastructure, etc), while others may rely more heavily on administrative records or expenditure data aggregated by pre-determined categories. The level of detail should match the purpose of the study. Collecting unnecessary data increases costs and complexity without improving decisionmaking. At the same time, failing to collect critical information can undermine the credibility and usefulness of the findings. For example, if the objective of costing is to inform program replication in another context, it is essential to include data on contributions of the government system to the program implementation in the original context. By contrast, if the program is being expanded within the same system, collecting such cost data may be unnecessary since it may be reasonably expected to be the same in both cases. Effective costing therefore depends on aligning data collection closely with the analytical approach and the original decision needs.

[1] The "Cost Measurement Framework" figure first appeared in Walls, Tulloch, and Holla's "Cost Measurement Guidance Note for Donor-Funded Education Programming," prepared for Building Evidence in Education (2020, revised 2026).

Only after these earlier steps are completed should data collection and analysis begin. At this stage, data are gathered, organized, validated, and analyzed in ways designed specifically to answer the identified cost questions. When the costing process follows this logical sequence—from objectives, to questions, to methods, to data, to answers—cost evidence becomes far more relevant, actionable, and valuable.

Applications of the framework

The Cost Measurement Framework presented in Figure 1 is equally applicable to costing discrete interventions as well as whole education systems. In both cases the progression of decisionmaking will be similar: the decision objectives will inform cost questions which will in turn dictate the selection of methods and help determine which data are needed. There are, however, some important differences in how much data is needed and, more importantly, how precise the resulting estimates might be.

A discrete intervention usually has clearly defined objectives, beneficiaries, implementation activities, and implementing organizations. The cost analysis of an intervention needs to identify all resources required to deliver that intervention, estimate their costs, and answer questions such as the cost per participant, the main cost drivers, or the cost-effectiveness of the intervention as compared to alternatives. The boundaries of the analysis are generally well defined, and the intervention can often be separated from the broader education system in which it operates.

System-level policy costing is fundamentally different because the policy often changes how the education system itself functions rather than adding a new program, thus influencing the foundational costing assumptions. Examples include curriculum reform, teacher workforce reform, changes to school funding formulas, expansion of compulsory education, or introduction of new learning strategies or approaches (e.g., digital learning). Such reforms frequently involve multiple education levels, institutions, and administrative functions. Rather than estimating the cost of a single intervention, cost analysis must estimate the incremental resources required to implement the policy across the education system while accounting for existing infrastructure, staffing, financing arrangements, implementation capacity, and interactions among different system components as well as changes to the infrastructure resulting from the reform.

Cost modeling aiming to establish cost projections for future implementation is likely to involve simulation models[2] with cohort-based demographic projections[3] and different implementation scenarios. Such modeling can be used for either intervention or system-level cost analysis, depending on the objective, and will need to rely on existing administrative data, however imperfect such data and resulting estimates might be.

[2] See, for example, this ECD macro-simulation model: https://ecdan.org/resource/unicef-ece-accelerator-simulation-model/.

[3] UNESCO provides guidance on simulation modeling and cohort-based demographic projections in its Simulation Model for Financing Education Development (SimFED) tool: https://www.unesco.org/en/education-financing/simulation-planning.

Methodologies for costing primary and secondary education systems are relatively well established by UNESCO-IIEP (International Institute for Educational Planning), the World Bank, UNICEF, and the Global Partnership for Education, who provide methodological guidelines for implementing costing analyses in support of education system reforms.[4] By contrast, there is less guidance for costing system-level reforms in ECCE, TVET, higher education, and non-formal education sub-sectors. In particular, the multisectoral nature of ECCE and TVET can make it difficult to capture financial information across multiple ministries, decentralized governments, employers, communities, and families, often resulting in underestimated costs. Further methodological development is needed for these sectors.

Despite these differences between cost analysis of an intervention and system-level cost modeling, the underlying principles are the same. In both cases, costing should begin with a clearly defined decision objective, identify all relevant resources from the chosen analytical perspective, distinguish between existing and additional resource requirements, document assumptions transparently, and align data collection and analytical methods with the intended use of the findings. The main difference is therefore not the costing methodology itself, but the objectives, scope of the analysis, and the types of decisions the evidence is intended to influence.[5]

The quality of both intervention-level and system-level cost estimates depend heavily on the quality of underlying data. At times, issues with data access or quality may trigger a revision of original study questions. For example, if a study question calls for cost-effectiveness analysis but there is no impact evaluation planned, it may not be possible to answer this question. Conversely, as stakeholders become engaged in the cost data study, they may identify additional questions of interest that they may want to add.

Cost study decisions should be discussed with key stakeholders and documented in a cost study design report made available to stakeholders and the public, if feasible. These may include the intended use of the findings, a description of the studied intervention, specific cost analysis questions, selected methodology, planned cost data collection, anticipated challenges and proposed solutions, as well as a plan for reporting and dissemination. A best practice is to include a review of the existing cost evidence in the report, as well (see Box 1).

[4] Existing guidance on costing education system reforms is found primarily in the education sector planning literature rather than in economic evaluation manuals. The principal references include the Education Sector Analysis: Methodological Guidelines (UNESCO-IIEP 2014; Volumes 1–2, updated with Volume 3 in 2021), which provide methodologies for estimating the resource requirements, financing needs, and affordability of national education sector plans; the UNESCO-IIEP and GPE Guidelines for Education Sector Plan Preparation (2015), which describe how to develop credible, fully costed education sector plans linked to national budgets; and the UNESCO-IIEP Guidelines for Capacity Development in Education Policy Planning and Resource Management (2012), which provides tools for policy analysis, sector planning, costing, financing, and resource management for ministries of education.

[5] System-level cost modeling is different from budget exercises, which policymakers routinely undertake to ensure that proposed reforms fit within available fiscal envelopes, medium-term expenditure frameworks, and sectoral priorities. While *budget* alignment aims to produce a financially feasible spending plan, *cost* analysis seeks to generate objective evidence about the actual resources required or expended to implement a program or policy.

BOX 1

On using existing cost evidence

Before launching new data collection efforts, decisionmakers should first review existing evidence and secondary data sources. In many cases, some information may already exist in financial records, administrative systems, prior costing studies, published research, or government databases. The growing body of cost evidence in education and ECCE means that organizations increasingly have opportunities to build on existing knowledge rather than starting from zero. A thoughtful secondary data review can save time and resources, reduce duplication of effort, and help refine the scope of the analysis. It can also reveal important gaps where new data collection is genuinely necessary.

When using existing cost evidence, it is important to recognize that its applicability is likely to be constrained by changes in local market conditions, cost structures of the original implementation model, specific assumptions and analytical decisions made during the costing study, and many other factors.

The next sections will follow the framework's logic, beginning with the decisionmaking objectives that would drive the development of cost analysis questions, then describing different methodological approaches and data collection and analysis decisions, and concluding with the reporting of findings and their dissemination.

How different stakeholders can use cost evidence

The ultimate value of cost evidence lies in its responsible and informed use in decisionmaking. When used appropriately and interpreted within context, cost evidence can improve education and ECCE policy, planning, implementation, and financing decisions, potentially resulting in large gains on outcomes of interest. At the same time, it is imperative not to misuse cost analysis findings, particularly when estimates are transferred across countries, implementation models, beneficiary populations, or delivery systems without appropriate contextual adjustment.

Cost estimates generated in one setting should not be used mechanically to budget or forecast costs in another context without careful assessment of comparability and adaptation needs. The costs to buy an input, deliver an output, or achieve an outcome are sensitive to geography, scale, infrastructure, staffing structures, implementation intensity, and market conditions. Cost evidence—particularly the underlying structure of costs—should therefore be treated as a decision-support tool rather than a universally transferable "price tag."

Many education stakeholders are at present not utilizing cost evidence in their decisionmaking to its full potential. Table 2 presents the six major categories of stakeholders with examples of potential use of cost evidence.

TABLE 2

Cost evidence use examples by stakeholder category

Stakeholder category	Potential uses of cost evidence
Governments and policymakers	**Should use cost evidence to inform sector planning, budgeting decisions, and general oversight and accountability, including to:** • Support prioritization across competing interventions and reforms within and across sectors. • Assess affordability and fiscal sustainability of proposed programs. • Guide scale-up, replication, redesign, or discontinuation decisions. • Provide general oversight and accountability of public finance expenditure. • Mobilize additional domestic and/or external funding.
Donors and funders	**Should use cost evidence to inform and justify funding allocation requests and investment decisions, including to:** • Compare alternative implementation models and delivery approaches through lens of cost-efficiency, cost-effectiveness, equity, and scalability. • Inform grant design, procurement, and contracting decisions. • Monitor implementation efficiency and accountability for resource use. • Support portfolio-level learning and comparative analysis across investments.
Implementing organizations and service providers	**Should use cost evidence to improve operational planning and resource management, including to:** • Identify major cost drivers and opportunities for efficiency gains. • Support staffing, procurement, and implementation decisions. • Improve forecasting and sustainability planning. • Inform adaptation of interventions to different contexts or scales. • Strengthen communication with funders and government partners regarding resource needs.
Researchers and evaluators	**Should generate and make accessible relevant new cost evidence through cost analyses and economic evaluations, including to:** • Compare interventions across contexts and implementation models • Improve understanding of implementation variation and resource requirements. • Generate evidence on efficiency, scalability, and sustainability.

TABLE 2

Cost evidence use examples by stakeholder category (continued)

Stakeholder category	Potential uses of cost evidence
Advocacy organizations and civil society	**Should demand information about cost evidence behind publicly funded programs and interventions use cost evidence to strengthen public accountability and support advocacy work in education, including to:** • Demand information about the resource implications of policy proposals. • Highlight underinvestment or inefficiencies in education systems. • Advocate for investments in high-impact interventions. • Promote public oversight and accountability for the expenditure of public resources.
Communities and the public	**Should use cost evidence for improve transparency regarding how education resources are used, including to:** • Support public understanding of education financing trade-offs. • Strengthen accountability for delivery and resource allocation. • Inform community participation in planning and oversight processes as well as school choice.

Cost evidence should be carefully contextualized and used as one input within broader decisionmaking processes rather than as a standalone determinant of policy or funding choices. In using cost evidence in decisionmaking, it is preferable to combine cost findings with evidence on program quality, implementation feasibility, equity, and impact, rather than using cost estimates in isolation. Wherever possible, users should rely on multiple sources of evidence, understand the assumptions underlying cost estimates, and avoid transferring findings mechanically across contexts without appropriate adjustment and validation.

USEFUL RESOURCES:

- Building Evidence in Education (BE2)'s "Cost Measurement Guidance Note for Donor-Funded Education Programming" provides guidance for applying cost evidence in education sector decisionmaking and donor-funded programming.

- The International Initiative for Impact Evaluation (3ie) Handbook: "Measuring Cost-Effectiveness in Impact Evaluation" provides operational guidance on interpreting and applying cost and cost-effectiveness findings in development contexts.

Data collection standards

This section introduces methodological standards for processes associated with cost data generation, including selection of a methodological approach, decisions relating to the timing of data collection, cost categorization, and the use of logic models and data collection protocols when planning and implementing cost data collection.

Costing methodology

The first and most consequential methodological decision in any cost data collection effort is choosing how to measure costs in the first place. There are three approaches as well as a hybrid approach:

- The ingredients method,
- The activity-based costing method,
- The expenditure-based method, and
- A hybrid of the above.

The right choice depends on what data are realistically obtainable in your specific context—and understanding the logic and trade-offs of each approach will help you make that decision with confidence.

The ingredients method

The ingredients method, developed by American economist Henry Levin in the 1970s and refined over decades of application in education research in the United States, is considered the gold standard for cost analysis. Its logic is straightforward: to know what a program costs, you first identify every resource ("ingredient") that the program requires to function, and then price it out. The ingredients can include staff and volunteer time, training, facilities, materials, transportation, technology, administrative support, and even the time contributed by parents, teachers, or students. The goal is to create a complete picture of all resources required for implementation, regardless of who actually paid for them. Donated goods, existing infrastructure, and unpaid labor are therefore treated as real costs because they still consume valuable resources that could have been used elsewhere.

Once all ingredients are identified, each is assigned a price using average market values or standardized local pricing information from the geographic area where the program operates.

For example, teacher time might be valued using average salary scales, transportation using prevailing local transport costs, and volunteer time using local wage benchmarks. Actual expenditures may be used in lieu of market prices when the objective is to understand the cost structure of the studied program and compute the achieved cost-efficiency or cost-effectiveness estimates.

This ingredients method offers several major advantages compared with the alternatives:

1. It makes it easier to **compare programs across locations and implementation settings** because costs for all programs in an analysis are based on standardized pricing rather than the unique circumstances of a specific project.
2. It allows analysts to **estimate what a program *would* cost in another region or country** simply by substituting local prices for the same ingredients, or to implement a macro-simulation of costs for a potential program expansion.
3. It captures **costs borne by multiple stakeholders**, not only the organization implementing the program. This means that implicit costs—such as time contributed by learners, their caregivers, teachers, or community members—become visible alongside explicit expenditures such as salaries or purchased materials.

For these reasons, the ingredients method is especially valuable for cost-effectiveness analysis and high-stakes policy decisionmaking. It also provides essential information for the planning of intervention replication, transfer to a different implementer, or scale-up.

The activity-based method

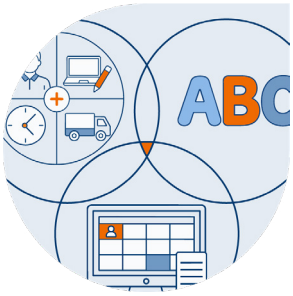
Despite its clear conceptual advantages, applying the ingredients method in its pure form in low- and middle-income countries can be challenging. It can only work when reliable and reasonably stable pricing data are available for a wide range of inputs across different geographic areas. In many contexts, however, such pricing databases do not exist or are incomplete, outdated, or inaccessible to researchers. Prices may also fluctuate substantially due to inflation, exchange-rate instability, transportation disruptions, input quality, or local market conditions. In addition, collecting detailed data on every ingredient can become logistically difficult for large, multi-component education or early childhood development programs that operate across multiple sites over long periods of time. Compared with many shorter-duration programs commonly studied in the United States, programs in developing countries often involve more complex implementation arrangements, varying local delivery models, and less centralized administrative systems.

Under these conditions, an activity-based costing (ABC) approach or an expenditure-based method may be more feasible. ABC starts with identifying the components ("activities") required to implement an intervention, such as teacher training or curriculum revision. Such components can be linked to specific outputs of interest, for example, the number of trained teachers, or the number of community libraries created. For each component, the analyst identifies all resources consumed, measures how much of each resource was used, and estimates values of those resources using either the documented expenditures, or market or shadow prices. Therefore, instead of organizing the analysis by individual ingredients like in the ingredients method, this method organizes costs by program component.

The expenditure-based method

The expenditure-based approach to costing in education estimates costs by analyzing the actual financial expenditures recorded in budgets, accounting systems, payroll records, invoices, and other financial documents. Rather than identifying and valuing all resources used to implement a program, this approach focuses on the amount of money that organizations, governments, or funders actually spent to implement the intervention. Expenditure-based costing is particularly useful for understanding the fiscal implications of educational programs, informing budgeting and financial planning, tracking spending patterns, and assessing affordability from the perspective of a specific funder or implementing agency. Because it relies primarily on existing financial records, the approach is often less time- and resource-intensive than methods requiring detailed resource identification.

However, expenditure-based costing has important limitations. Financial records frequently exclude resources that do not involve direct monetary transactions, such as volunteer labor, donated goods and services, use of existing facilities, or participants' time. In addition, accounting categories and reporting practices may vary across organizations and contexts, limiting comparability across studies. As a result, expenditure-based estimates may understate the full resource requirements of an intervention. Another limitation is low comparability compared to the ingredients or ABC methods: because actual expenditures reflect the specific procurement decisions, salary structures, and accounting conventions of a particular implementing organization, two organizations running identical programs in the same location can produce different cost estimates—and neither estimate may accurately reflect what it would cost a third organization to replicate the program.



The hybrid approach

For many programs in global education contexts, the most pragmatic and analytically rigorous approach is a hybrid that combines elements of the ingredients method, the activity-based costing method, and the expenditure-based method. In a hybrid approach, the analyst follows the logic of the ingredients method—identifying and listing all the resources the program requires, organized by ingredient type and program component—but uses actual expenditure data, rather than external price databases, to assign monetary values to those ingredients. This preserves the comprehensiveness of the ingredients approach (since all ingredients are included) while costs are assigned based on the real financial data from the implementing organization.

The hybrid approach is particularly well suited to programs operating in environments with high price volatility, to multi-year programs where expenditure tracking has been integrated into financial systems from the beginning, and to contexts where ingredient-level market price databases do not exist, but financial management records are reasonably detailed. This approach can produce estimates that are both more realistic than a pure ingredients approach built on questionable price data and more comparable than a pure expenditure approach built on one organization's specific cost structure.

Decision tree: Which method to use

The following decision tree is intended to guide analysts to the most appropriate method given the data environment they are working in.

STANDARD: CHOOSE THE METHOD APPROPRIATE FOR THE CONTEXT OF THE STUDY, STUDY OBJECTIVES AND STUDY QUESTIONS.

USEFUL RESOURCES FOR THE INGREDIENTS METHOD:

- Levin, McEwan, Belfield, Bowden & Shand, "Economic Evaluation in Education" (3rd ed.) is the authoritative textbook on the ingredients method and the definitive methodological reference.
- The IES's "Cost Analysis: A Starter Kit" is a practical step-by-step guide to applying the ingredients method in education program evaluation contexts.
- Cost Analysis in Practice (CAP) "Project Cost Analysis Guidelines" is a detailed implementation guidance note with worked examples, specifically designed for education programs.
- AIR's Cost Analysis Standards Project (CASP) "Standards for Economic Evaluation of Educational and Social Programs" sets quality standards for ingredients-based analyses, useful as a checklist for rigor.

USEFUL RESOURCES FOR THE HYBRID APPROACH:

- The World Bank / IRC / SIEF's "Capturing Cost Data" note provides detailed guidance on organizing ingredient-level data using expenditure records, with particular attention to programs in lower-income country contexts.
- The International Rescue Committee (IRC)'s "Cost analysis methodology" explains how to combine ingredient listing with expenditure-based pricing for complex programs, including education programs.
- The BE2 "Cost Measurement Guidance Note" offers practical guidance on collecting and valuing ingredients using financial records within a value-for-money framework.

USEFUL RESOURCES FOR THE EXPENDITURE METHOD:

- The IRC's "Cost analysis methodology" offers practical guidance for extracting activity-level cost data from financial management systems in complex program environments.
- The 3ie "Measuring Cost-Effectiveness in Impact Evaluation" training handbook provides step-by-step guidance on organizing costs by activity for use in cost-effectiveness analyses embedded in impact evaluations.
- J-PAL's "Costing Guidelines" explains how to extract and organize expenditure data to produce cost estimates usable for policy comparison across programs.

BOX 2

On using cost evidence for intervention replication, transfer, or scale-up

Detailed cost evidence is essential for determining whether an intervention can be successfully replicated, transferred to a new implementing organization, or scaled to reach larger populations. Observed costs from pilot or small-scale implementations should not be mechanically extrapolated to estimate the costs of large-scale implementation. **Cost structures frequently change as programs expand, and unit costs observed during pilots may either overestimate or underestimate costs at scale.** This is particularly true when considering the costs of labor, because many education pilots or small-scale programs rely on volunteer labor which should be properly resourced if implemented at scale. Analysts should therefore distinguish between average costs (total costs divided by the number of participants served) and marginal costs (the additional costs required to serve one additional participant or site). While some costs may decline with scale because fixed costs are spread across a larger number of beneficiaries, other costs may increase as programs expand to harder-to-reach populations, populations that require more resources, or more geographically dispersed areas.

Scale-up may also introduce entirely new cost categories that are absent or minimal in pilot programs. Examples include government coordination and oversight, large-scale training systems, supervision and coaching structures, quality assurance mechanisms, monitoring and information systems, procurement and logistics systems, stakeholder engagement, and program management across multiple administrative levels. These additional ingredients should be explicitly identified and costed rather than assumed to be captured in pilot cost estimates, and information on institutional readiness to absorb the intervention should be included as part of the study.

Prospective cost modeling for these purposes requires a detailed inventory of intervention ingredients and comprehensive documentation of how the intervention was implemented as well as information on the new implementation plans. Specifically, analysts need the following information:

- The characteristics of beneficiaries from the original program and the new implementation;
- Intervention description including dosage (e.g., number and duration of sessions, materials provided per participant), delivery methods, implementation sequence, scale;
- Information on the contextual factors that may influence intervention delivery as well as its costs;
- Information on donated resources necessary for the intervention implementation; and
- Information on the context of the proposed replication, transfer, or scale-up, to identify which resources would change under new implementation scenarios and to adjust for differences in local prices, staffing structures, and delivery conditions.

Prospective cost estimates for replication, transfer, or scale-up can be developed through scenario-based cost modeling. Analysts can specify alternative implementation scenarios (e.g., implementation by NGOs versus government systems, different delivery modalities, or varying dosage) and estimate the resources required under each scenario. Sensitivity analysis is useful for examining the implications of alternative assumptions.

USEFUL RESOURCES:

- Levin, McEwan, Belfield, Bowden & Shand, “Economic Evaluation in Education” (3rd ed.)
- CAP’s “Project Cost Analysis Guidelines”
- IES’s “Cost Analysis: A Starter Kit”

Timing of cost data collection

There are two approaches to the timing of cost data collection: concurrent and retrospective data collection. In concurrent data collection, cost information is gathered while the program is being implemented. This approach is generally preferred because it tends to produce more accurate and complete data.[6] Staff can record time use, resource allocation, expenditures, and implementation activities as they occur, reducing reliance on memory and incomplete records. Concurrent collection is especially important for complex programs, multi-site interventions, or initiatives that run over long periods of time.

Retrospective data collection, by contrast, involves reconstructing costs after implementation has ended, using financial records, interviews, administrative data, and participant recall. Retrospective approaches can work reasonably well for smaller programs of short duration (particularly those lasting one school year or less) where implementation activities are relatively simple and documentation systems are strong. However, the longer and more complex a program becomes, the greater the risk of missing data, recall bias, and inaccurate allocation of shared costs. Additionally, long implementation periods can also introduce challenges related to inflation adjustments, exchange rates evolution, and the estimation of depreciation rates for capital assets.

Although concurrent cost data collection requires advance planning, it is typically far simpler, less costly, and more accurate than retrospective costing. By integrating cost data collection into routine program implementation and monitoring, organizations can avoid the substantial time and expense of reconstructing resource use from incomplete records and staff recall after implementation has ended.

STANDARD: WHENEVER POSSIBLE, IMPLEMENT CONCURRENT COST DATA COLLECTION.

USEFUL RESOURCE:

- The World Bank / IRC / SIEF's "Capturing Cost Data" demonstrates the benefits of concurrent cost capture and its key principles.

[6] One exception is capturing non-recurrent costs such as capital costs, which typically rely on retrospective data collection.

BOX 3

On reducing cost data collection barriers

A common barrier to conducting cost studies is the reluctance of implementing organizations to share financial records, staffing information, or detailed implementation data because they consider such information proprietary or commercially sensitive. Without access to these data, analysts may be unable to estimate costs accurately or document the intervention with sufficient detail to support replication, comparison, or scale-up analyses. To mitigate this risk, expectations regarding data sharing should be established before the study begins through a formal memorandum of understanding (MOU) or data-sharing agreement specifying the types of data to be provided, timelines for access, procedures for data storage and protection, and permissible uses and disclosure of findings. Agreements should clarify whether results will be reported only in aggregate form, whether organization-specific information will be anonymized, and what review rights implementing partners will have prior to publication. Early engagement with implementers to explain the purpose and value of cost analysis, identify confidentiality concerns, and jointly develop data collection procedures can help build trust and reduce resistance.

Cost categorization

Using standardized categories and resource types in the sector would improve comparability across studies and make reporting easier for funders, governments, and researchers. Many costing studies organize data using a common cost classification with a set of cost categories and resource types. The broad cost classification makes a division between overhead costs and direct costs and breaks down further into cost categories (e.g., indirect program management and direct program delivery) and resource types (e.g., labor/personnel, land/buildings/infrastructure, facilities rental, materials/supplies/equipment/technology, and travel/accommodation/transport). In addition, it is helpful if costs are labeled as recurrent or non-recurrent and as paid for or donated depending on the objectives of the costing exercise.

Some cost analysis questions may require further refined cost categorization or sub-categorization. This could be tied to delivery stages, geographic regions, types of beneficiaries (for example, disaggregating costs of program delivery by learner disability status or remoteness of school location), stakeholder groups, or implementation activities; other questions may need data on the specific types of resources used and their costs. For this reason, users should feel free to define more detailed cost categories within the broader standard categories when standard approaches do not adequately reflect program realities or analytical needs. In these situations, sub-categories should be designed to be mutually exclusive, clearly defined, easy to replicate, and aligned with the primary cost questions driving the analysis.

At the level of the study, it is also important to include the classification of the costed program according to international standards of classification. Such classification is essential for enabling large-scale meta-analysis, monitoring of education progress, and knowledge sharing. See Annex C for details.

STANDARD: BALANCE ADHERENCE TO THE COMMON COST CATEGORIES AND RESOURCE TYPES WITH THE OBJECTIVES, THE CONTEXT OF THE COST STUDY, AND THE TYPE OF POPULATION INVOLVED.

USEFUL RESOURCES:

- Brookings' Childhood Cost Calculator (C3) and C3 case studies report provides a highly operational and standardized classification system designed for real-world costing across diverse child and youth interventions.
- CAP's "Project Cost Analysis Guidelines" provides practical templates and examples of common education cost categories.
- J-PAL's "Costing Guidelines" discusses flexible categorization approaches for field-based implementation settings.

Logic model use

Using a logic model for planning and implementing a cost study can greatly strengthen cost data collection and analysis. It can help analysts connect resources, activities, outputs, and intended outcomes in a structured way. Logic models clarify what components of a program should be costed, how different activities relate to one another, and what outputs and outcomes relate to which resources. They are especially useful for complex, multi-component interventions involving several delivery pathways or stakeholder groups. Logic models can also improve transparency by making explicit which parts of a program are included in the analysis and which are not.

However, formal logic models may not always be necessary. For relatively simple interventions with straightforward implementation structures, detailed logic modeling may add unnecessary complexity without significantly improving the analysis. In these cases, a simpler activity map or implementation description may be sufficient.

STANDARD: USE LOGIC MODEL IF IT CAN AID IN DATA COLLECTION AND ANALYSIS DECISIONS.

USEFUL RESOURCES:

- CAP's "Project Cost Analysis Guidelines" demonstrates how logic models can guide costing design and resource identification.
- BE2's "Cost Measurement Guidance Note for Donor-Funded Education Programming" is especially useful for operational planning and donor-funded programming in developing-country contexts.
- 3ie's "Measuring Cost-Effectiveness in Impact Evaluation" provides examples of linking program pathways to costing and effectiveness analysis.

Data collection protocols

Strong cost evidence depends not only on *what* data are collected, but also on *how* they are collected. Clear data collection protocols help ensure that information is gathered systematically across sites, time periods, and data collectors. Standardized protocols are particularly important when multiple organizations, field teams, or geographic regions are involved. Common protocol elements include definitions of cost categories, rules for allocating shared costs, procedures for valuing donated resources, documentation standards, data verification processes, and timelines for collection and reporting. Well-designed protocols improve data reliability and robustness, reduce inconsistencies, and make analyses easier to replicate and audit. In costing multi-site or multi-country programs, standardized protocols are particularly critical.

Programs operating in low-resource or rapidly changing settings may require flexible procedures that can adapt to local realities while still maintaining core standards for transparency and consistency. For example, data collection tools may need to accommodate incomplete administrative data, variable financial reporting systems, or informal contributions from communities and volunteers. If reliable financial records exist, they may be a good place to start before developing additional templates or tools. It is important that data collection tools include multiple types of data and not rely solely on a single source, such as financial records. Flexibility can also be important when new implementation activities emerge during the life of a program or when unforeseen events disrupt planned data collection processes. Data collection protocols should ideally include core definitions, documentation and validation procedures, and rules for handling decisions.

There are several excellent examples of cost data collection processes and protocols, for example:

- Brookings' Childhood Cost Calculator (C3)
- World Bank/SIEF: Template for costing interventions that encourage remote learning and costing tool and manual for school reopening and learning recovery.
- J-PAL's cost data collection template.
- The IRC's library of cost data collection templates and associated resources.

STANDARD: INCLUDE DATA COLLECTION PROTOCOLS IN REPORTS FOR TRANSPARENCY.

USEFUL RESOURCES:

- AIR (American Institutes for Research) Standards for Economic Evaluation offers comprehensive standards for transparency, documentation, and methodological consistency.
- CAP's "Project Cost Analysis Guidelines" provides practical guidance for structuring data collection procedures and protocols.
- J-PAL's "Costing Guidelines" includes field-oriented recommendations for collecting reliable cost data in low-resource settings.
- The IRC's "Cost analysis methodology" has useful examples of flexible protocol designs for application in complex implementation environments.

Data analysis standards

This section introduces methodological standards for processes associated with the analysis of cost data, including selection of the appropriate analytical approach, cost adjustments, analyzing data from different stakeholder perspectives, methods for allocating shared costs, costing in-kind contributions, managing missing data, and conducing sensitivity analyses.

Analysis methods

Cost evidence can be analyzed in different ways depending on the question being asked and the intended use of the findings. No single analytical approach is appropriate in all circumstances. Rather, the choice of method should be guided by expected use of the cost evidence resulting from the analysis, such as improving implementation efficiency, assessing its affordability, comparing alternative interventions, or determining whether benefits justify investment, to name a few. This section outlines six analytical approaches (cost-economy, cost-efficiency, cost-effectiveness, cost-feasibility, cost-utility, and cost-benefit analysis) and discusses the types of questions each method is best suited to address.

The choice of cost analysis method also determines the types of monitoring and evaluation data that should accompany the analysis. While all cost studies benefit from good implementation data to document how the intervention was delivered and to help interpret variations in costs across sites or over time, different analytical approaches require different complementary evidence. Cost-efficiency analysis depends on reliable monitoring data to measure the outputs produced with the resources invested. Cost-effectiveness and cost-benefit analyses additionally require credible evidence on program outcomes or impacts, ideally generated through rigorous impact evaluation. By contrast, cost-economy and cost-feasibility analyses can often be conducted without outcome evaluation, although implementation and contextual information remain essential for interpreting findings. Cost analysis should therefore be planned alongside monitoring and evaluation activities to ensure that the evidence needed for the intended analysis is available.

Cost-economy analysis

Cost-economy analysis identifies and documents all relevant costs associated with a program or intervention. Rather than focusing on outcomes or impacts, it concentrates on mapping out the costs of intervention ingredients used (or ingredient categories, if data on ingredients

is unavailable) and the unit prices for the ingredients. It helps identify key cost drivers for the intervention and can be an essential tool for resource-sensitive program management, particularly with regard to decisions on program replication, transfer, or scale-up. It also forms the foundation for all other cost analyses.

USEFUL RESOURCE: The most useful practical guidance for economy-oriented analysis in development settings is found in the World Bank / IRC / SIEF's "Capturing Cost Data" and the IRC's "Cost analysis methodology," both of which emphasize expenditure tracking, resource allocation, and identification of avoidable costs during implementation.

Cost-efficiency analysis

Cost-efficiency analysis examines the relationship between costs and outputs, rather than final outcomes or impacts. It asks how economically a program converts resources into deliverables such as teachers trained, classrooms built, students reached, or learning materials distributed. Cost-efficiency analysis is particularly useful when outcome data are unavailable, unreliable, or expected only in the long term, and is often used for operational management, budgeting, and implementation monitoring.

USEFUL RESOURCE: J-PAL's "Costing Guidelines" provide particularly practical guidance on calculating unit costs and linking program expenditures to implementation outputs in low- and middle-income country contexts.

Cost-effectiveness analysis (CEA)

Cost-effectiveness analysis compares the costs of interventions relative to the outcomes they produce. In education and ECCE, CEA commonly estimates measures such as cost per child learning, cost per additional student achieving proficiency, or cost per developmental gain achieved, allowing decisionmakers to compare alternative interventions using a common outcome metric. Unlike cost-efficiency analysis, which focuses on outputs, CEA requires evidence on actual program impacts that are measured using a credible counterfactual and is therefore closely connected to impact evaluation. It is recommended to present findings for both cost and results without converting them to ratios or standardizing them.[7]

USEFUL RESOURCE: 3ie's "Measuring Cost-Effectiveness in Impact Evaluation," which provides step-by-step guidance on integrating cost and outcome analysis in development settings.

[7] We recommend that cost analysts work closely with impact evaluators to ensure that units of outcome measurement match the units of cost measurement. For example, if the impact evaluation uses intent-to-treat approach in estimating the impacts of the intervention, the same method should be applied in calculating the cost-efficiency and cost-effectiveness of the intervention.

Cost-feasibility analysis (CFA)

Cost-feasibility analysis examines whether a program or intervention can realistically be financed, implemented, and sustained within existing resource constraints. Rather than asking whether a program is efficient or cost-effective, it asks whether the required costs are affordable and operationally manageable given available budgets, staffing, infrastructure, and institutional capacity. Cost-feasibility analysis is **especially important for scale-up decisions**, where interventions that appear effective in pilot settings may become financially or operationally unrealistic at larger scale.

USEFUL RESOURCES: Practical guidance on this type of analysis can be found in the CAP's "Project Cost Analysis Guidelines" and the World Bank / IRC / SIEF's "Capturing Cost Data," both of which discuss affordability, scalability, and practical implementation constraints.

Cost-utility analysis (CUA)

Cost-utility analysis is a form of economic evaluation that compares costs relative to standardized utility-based outcome measures, most commonly measures that combine quantity and quality of life or well-being. CUA is widely used in health economics, where outcomes are often expressed as quality-adjusted life years (QALYs) or disability-adjusted life years (DALYs), but it remains relatively uncommon in education and ECCE because the field, until recently, lacks widely accepted utility metrics comparable across interventions. Nevertheless, CUA may become more relevant as education and child development research increasingly incorporates broader measures of well-being, functioning, and life-course outcomes.

USEFUL RESOURCE: The best technical guidance for understanding CUA within the broader economic evaluation framework is AIR's Cost Analysis Standards Project (CASP) "Standards for Economic Evaluation of Educational and Social Programs."

Cost-benefit analysis (CBA)

Cost-benefit analysis compares the costs of an intervention with its benefits expressed in monetary terms. By assigning monetary values to outcomes such as increased earnings, improved health, reduced crime, or higher productivity, CBA allows analysts to estimate net benefits, benefit-cost ratios, or rates of return and to compare investments across sectors using a common monetary metric. Because monetizing educational and developmental outcomes can be methodologically complex and dependent on long-term assumptions, CBA often requires more extensive modeling than other forms of cost analysis.

USEFUL RESOURCE: The foundational resource for conducting CBA in education remains Henry Levin and colleagues' "Economic Evaluation in Education: Cost-Effectiveness and Benefit-Cost Analysis," which provides detailed guidance on valuation methods, long-term benefits estimation, and interpretation of economic returns.

STANDARD: CHOOSE THE ANALYSIS METHOD APPROPRIATE FOR THE COST QUESTIONS ASKED AND THE DATA AVAILABLE AND PRESENT THE ANALYSIS PLAN IN A COST STUDY DESIGN DOCUMENT.

Cost adjustments

Discounting

When a program's costs are distributed across multiple years, analysts convert expenditures to their present-day equivalent value to ensure that all costs are expressed in comparable terms—a process known as discounting. Despite broad agreement in economic evaluation field that discounting is necessary for multi-year programs, the field does not have a consensus on the appropriate discount rate, with analysts applying rates ranging from 0% to 15% depending on institutional convention, funder requirements, or individual judgment. This variation is a significant obstacle to comparability: two otherwise identical cost analyses applying different discount rates will produce different cost estimates, making cross-study comparisons misleading without careful adjustment. To address this, we recommend the following rules of thumb when determining discount rates:

- A **discount rate consistent with a specific national directive**, to enable comparability of different estimates for national decisionmaking.
- A discount rate of **5% to be applied to all programs in the absence of clear reasons for a different rate**. This rate is recommended by several leading health and development economics bodies and increasingly adopted in the education cost literature as a reasonable approximation of social time preference in low- and middle-income country contexts.
- A discount rate of **0% may be applied to programs funded by bilateral donors**, reflecting the nature of bilateral funding which is minimally fungible across time and therefore does not have the same opportunity cost as funding from other sources.

Regardless of the rate chosen, the most important thing is to explicitly state the discount rate used in any report or publication. Because discount rate assumptions can meaningfully affect cost estimates for long-duration programs, analysts are also encouraged to include the discount rate as a parameter in their sensitivity analysis, presenting results under at least two alternative rates so that readers can assess the sensitivity of findings to this assumption.

Amortization, annualization, and depreciation

In conducting cost analyses of education interventions, analysts should consider whether the costs of durable or long-lived resources—such as equipment, vehicles, buildings, curriculum development, or software—need to be amortized, depreciated, and/or annualized. These adjustments are standard practice in economic evaluation because they align the value of resources with the period over which they generate benefits. Depreciation allocates the cost of a tangible asset over its useful life, whereas amortization applies the same principle to intangible assets. Annualization converts the acquisition cost of a capital asset into an equivalent annual cost, considering both the asset's useful life and the opportunity cost of capital. Under certain circumstances, however, analysts may choose not to apply these adjustments—for example, when the objective is to document actual expenditures incurred during a specific implementation period. Whatever approach is adopted, all decisions regarding amortization, depreciation, and annualization should be explicitly documented, justified, and transparently reported.

Currency conversion and inflation adjustment

Currency conversion[8] and inflation adjustment are standard procedures in cost analysis conducted to ensure that all costs are expressed in a common currency and price year. These adjustments allow costs incurred in different countries, currencies, and years to be meaningfully compared and aggregated. Currency conversion translates costs from one currency into another using a specified exchange rate, whereas inflation adjustment converts costs from different years into constant prices by accounting for changes in the general price level over time. Under certain circumstances, analysts may elect not to adjust costs for inflation—for example, when all costs were incurred within a short period and inflation is negligible. Whatever approach is adopted, all decisions regarding currency conversion methods, exchange rates, price years, inflation indices, and adjustment procedures should be explicitly documented, justified, and transparently reported.

STANDARD: EXPLICITLY STATE ALL COST ADJUSTMENTS APPLIED IN ANY REPORT OR PUBLICATION AND PROVIDE JUSTIFICATION FOR THE DECISIONS MADE.

USEFUL RESOURCES:

- AIR's Cost Analysis Standards Project (CASP) "Standards for Economic Evaluation of Educational and Social Programs"
- CAP's "Project Cost Analysis Guidelines"
- 3ie's "Measuring Cost-Effectiveness in Impact Evaluation"

[8] The World Bank's World Development Indicators (WDI) is the most used source for obtaining exchange rates. It draws data from IMF International Financial Statistics (IFS).

Perspectives

Cost evidence is inherently perspective-dependent: which costs are included, which are omitted, and how they are interpreted depends on whose perspective the cost study is addressing and whose decisions it will aim to inform. The costs of any education or ECCE intervention are typically borne by multiple stakeholders, such as the national education system, funder of the intervention, parents, and communities. A cost analysis, therefore, can be conducted from the perspective of any of these actors, or even from all of them at once (what's called a "social perspective"). Any cost estimate is only meaningful when it is anchored to a clearly stated perspective that specifies whose costs are being counted. The analysis must always specify its perspective explicitly.

Conducting the cost analysis from the social perspective is a common and desirable solution since it attempts to capture the full cost to society of delivering the program regardless of who bears it. Each perspective answers a different question and serves a different decisionmaker: a ministry of finance may want the social perspective to assess the true resource implications of a policy, a bilateral donor may want its own funding perspective to assess its return on investment, an implementing NGO may want its operational perspective to inform program budgeting.

Rather than treating the choice of perspective as a constraint that forces the analyst to produce a single number, we suggest that analysts present multiple cost estimates if feasible, each corresponding to a distinct and clearly identified perspective. A multi-perspective presentation is much more useful than a single estimate. It reveals, for instance, how much of a program's true cost is being borne by families or communities rather than by funders, which is critical for equity analysis and for assessing whether a program is genuinely affordable for the populations it intends to serve. Where multiple perspectives are presented, each estimate should be clearly labeled and the rationale for the selection of perspectives explained in the analysis.

STANDARD: EXPLICITLY STATE THE ANALYTICAL PERSPECTIVE(S) USED, JUSTIFY THE INCLUSION AND EXCLUSION OF COSTS ACCORDINGLY, AND, WHENEVER FEASIBLE, PRESENT ESTIMATES FROM MULTIPLE PERSPECTIVES TO IMPROVE TRANSPARENCY, COMPARABILITY, AND USEFULNESS FOR DECISIONMAKING.

USEFUL RESOURCE: AIR's Cost Analysis Standards Project (CASP) "Standards for Economic Evaluation of Educational and Social Programs"

Shared costs

"Shared costs" are referred here to all costs that support more than one program, activity, site, or funding stream and therefore cannot be assigned directly to a single intervention without an allocation rule. This includes costs of infrastructure as well as human resources and can be indirect as well as general and administrative costs, both at the local sites and implementer's headquarters. In the context of government systems, shared costs may refer to resources that are shared among various governmental departments or units and should be considered according to their function rather than the payer.

There is a general consensus in the field that shared costs should not be ignored, because doing so understates the real resources required for implementation; instead, they should be allocated using a transparent and defensible basis, such as staff time, number of beneficiaries, space used, level of effort, expenditure share, or activity share. In determining the shared cost allocation method, it is important to balance consistency with practicality. When possible, we recommend a more granular approach: shared costs should be allocated to specific programs based on documented, activity-level estimates of resource use, and the allocation methodology should be explicitly described in any report so that readers can assess its reasonableness. Regardless of the method used, analysts should disclose it in reporting and publications.

STANDARD: IF FEASIBLE, SHARED COSTS SHOULD BE ALLOCATED BASED ON DOCUMENTED ESTIMATES OF RESOURCE USE.

USEFUL RESOURCE: CAP's "Project Cost Analysis Guidelines"

BOX 4

On shared costs in multisectoral studies

The multisectoral nature of some education sectors (particularly ECCE and TVET) creates additional challenges for cost data collection and analysis. Responsibility for financing and service delivery may be shared across ministries, decentralized governments, private providers, employers, communities, and families, each with different budgeting systems, accounting practices, and data sources. Cost analysts should therefore define the boundaries of the intervention explicitly, identify all organizations contributing resources, and include all relevant expenditures and in-kind contributions within the chosen analytical perspective, regardless of the institution through which they are financed. Where resources are shared across multiple programs or sectors, costs should be allocated using transparent, well-documented allocation rules that are appropriate to the context. Explicit documentation of these decisions is essential for ensuring that cost estimates are complete, reproducible, and comparable.

Costing in-kind contributions

In-kind contributions are goods, services, labor, and facilities provided at no financial cost to the implementing organization. They are very common in education and ECCE programs, particularly in low- and middle-income country contexts where government-provided classroom space, community volunteer time, and donor-supplied materials routinely form a substantial share of program inputs. These contributions are frequently essential to intervention's success and need to be included and recognized in a cost analysis, either in their monetary value or the documented list of ingredients.

The analytical challenge is assigning a monetary value to resources for which no invoice exists. J-PAL recommends that once in-kind donations are included in the ingredient list, the analyst must decide whether to assign an estimated market value or to record a cost of zero—a decision that depends on the purpose of the analysis. If the goal is to estimate the cost of the program exactly as evaluated in its current context, a zero cost may be defensible, but if the goal is to estimate the cost to society or to inform replication in another context where the same goods or services may not be freely available, the market value must be included (2025).

For the valuation of volunteer and community labor—the most common form of in-kind contribution in global education programs—best practice is to apply the local market wage for equivalent work, which can be obtained from administrative wage data, national labor force surveys, or direct surveys of volunteers about their alternative employment. Where no market equivalent exists, willingness-to-pay estimates or replacement cost approaches are acceptable alternatives, provided the method is clearly documented.

We recommend that in-kind contributions always be recognized in cost analyses and when appropriate for the cost questions, be valued at their local market equivalent. They should be listed as a distinct category in ingredient lists so their scale is transparent to readers, and that the valuation methodology be clearly described in all reports.

STANDARD: IN-KIND CONTRIBUTIONS SHOULD BE RECOGNIZED IN THE ANALYSIS EITHER IN THEIR MONETARY VALUE OR AS A LIST.

USEFUL RESOURCE: CAP's "Project Cost Analysis Guidelines"

BOX 5

On capturing household contributions

Capturing the contributions of families is an essential component of comprehensive education costing, yet these costs are frequently overlooked because they fall outside government or implementing agency budgets. Households bear substantial direct costs of education, including school fees, uniforms, textbooks, transportation, meals, tutoring, digital devices, internet access (in some contexts), and examination fees, as well as indirect costs such as caregivers' time spent supporting learning, traveling to schools, attending meetings, or supervising learning at home. In low- and middle-income countries, these household contributions represent a significant share of the total resources devoted to education and may determine whether children are able to enroll, attend regularly, or benefit fully from an intervention. Failure to account for these costs can substantially underestimate the true cost of education services, overstate the affordability or scalability of interventions, and obscure important equity implications, as financial and time burdens often fall disproportionately on poorer households, women, and caregivers of children with disabilities. Costing studies should therefore strive to identify, measure, and report household contributions, particularly when adopting a societal perspective or assessing equity, affordability, or the distribution of costs across stakeholders.

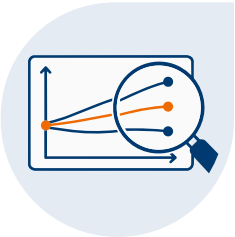
Managing missing data

Missing data are a common feature of cost studies, making it important to apply consistent and transparent standards for how data gaps are identified, addressed, and reported. Most cost studies will encounter some missing data: maybe the program used volunteer labor but did not track the hours, or maybe a subcontractor was paid a lump sum for different tasks but was not asked to track how much each task cost. Such situations are common and can introduce a sizable error in cost estimates. It is therefore essential that studies have a clear plan for handling missing data through a documented, transparent process rather than exclusion. Analysts should first identify which data are missing, assess whether the missing information is likely to meaningfully affect the main estimates, and attempt to recover it through financial records, administrative data, interviews, time-use estimates, procurement documents, or comparable program data. When data cannot be recovered, we recommend that analysts use clearly stated assumptions, imputation rules, or reasonable proxy values and then test the effect of those assumptions through sensitivity analysis.

The best practice is to report clearly and comprehensively what data are missing, explain what methods were used for imputation, and distinguish between verified data and imputed values so users can judge the strength of the evidence. For example, the statement "we assume that all tablets purchased last for all three years of the program and don't account for breakage and loss of tablets" clarifies how the technology used in the program was costed, and "the time required per consultation was estimated by the program with feedback from facilitators" helps readers understand how estimates were made. A discussion of risks associated with missing data is also recommended.

STANDARD: REPORTING ASSUMPTIONS, IMPUTATION RULES, AND PROXIES USED.

USEFUL RESOURCE: CAP's "Project Cost Analysis Guidelines"



Sensitivity analysis

Cost estimates are always an approximation. Sensitivity analysis is the tool that helps make inherent uncertainties visible by testing how much the estimates change when key inputs or assumptions are varied within a plausible range. This allows the analyst to communicate not just a point estimate but the range within which the true cost is likely to fall and the assumptions on which the estimate most depends.

Sensitivity analysis is not an optional exercise but a standard practice for any cost analysis intended to inform decisions. At minimum, analysts should vary the following parameters:

- the discount rate;
- the valuation assigned to in-kind contributions and volunteer time (if relevant and appropriate);
- the allocation percentages applied to shared costs and personnel;
- equity considerations, recognizing differential needs of different population groups;
- unit prices for major ingredient categories (particularly in volatile or inflationary contexts); and
- any specific assumption made to address missing data, tested against alternative plausible values.

For each tested parameter, the analysis should report the resulting change in the primary cost metric—total cost, unit cost, or cost-effectiveness ratio—so that readers can see clearly which assumptions drive the finding and which are inconsequential. Where a cost estimate proves highly sensitive to a particular assumption, that sensitivity should be highlighted prominently in the analysis narrative and flagged as a priority area for improved data collection in future iterations of the program.

STANDARD: COST ANALYSIS MUST INCLUDE SENSITIVITY ANALYSIS ON KEY INPUTS AND ASSUMPTIONS.

USEFUL RESOURCE: 3ie's "Measuring Cost-Effectiveness in Impact Evaluation"

Reporting and publication standards

The value of cost evidence depends not only on the quality of the analysis itself, but largely on how clearly and transparently findings are reported and disseminated. Consistent reporting standards improve comparability across studies, support evidence synthesis and meta-analysis, strengthen accountability to funders and governments, and make it easier for decisionmakers to interpret and apply findings appropriately. Recent literature[9] also emphasizes the importance of publishing cost evidence for interventions regardless of whether program impacts are statistically significant, since selective reporting weakens the overall evidence base and creates bias in comparative analyses.

Additionally and critically, cost findings should be communicated in ways that directly respond to the decisionmaking objectives, as described in the Cost Measurement Framework (Figure 1). Analysts should present results using clear, layman language and intuitive measures, such as total costs of the program versus costs to different stakeholders versus unit costs under different costing scenarios. Budget and value-for-money implications for continued program implementation, replication, transfer, and scale-up should be discussed as appropriate. Visual displays, summary tables, and scenario-based projections are particularly helpful in making findings more accessible to non-technical audiences.

When benchmarking results against those from other programs or settings, analysts should explicitly discuss differences in intervention design, implementation fidelity, beneficiary characteristics, costing perspective, and local price contexts that may limit comparability. Comparisons should therefore be framed as illustrative rather than definitive unless common methodologies and assumptions have been used. All communication products should clearly describe key assumptions, sources of uncertainty, and limitations of the analysis so that policymakers can appropriately interpret findings and avoid overgeneralizing results beyond the contexts in which they were generated. Unless prepared specifically for technical audiences, we recommend presenting technical information, such as details of design, data collection, and data analysis, as well as details of calculations, in the technical annexes, reserving the main body of the report for the presentation of findings and their implications in relation to the expected decisionmaking and noting limitations in their use. A report narrative presenting cost study findings in an engaging, storytelling way will help ensure the report holds the attention of its intended audiences.

[9] For example, Brown and McIntosh (2025) argue that the failure to report costs for "unsuccessful" interventions creates systematic bias in the evidence base and weakens opportunities for comparative analysis and meta-analysis.

Finally, we recommend that all cost studies identify the International Standard Classification of Education (ISCED 2011) level(s) to which the intervention or reform applies, use UNESCO-UIS/OECD/Eurostat (UOE)[10] terminology when reporting on costs of education programs where appropriate, and specify the relevant Classification of the Functions of Government (COFOG) education function(s) under which the program or expenditure would be classified. Using these internationally recognized frameworks makes cost estimates easier to interpret, compare, and integrate with national and international education statistics and reporting. It also enables cost estimates to be linked with national budgets and internationally reported education statistics. Annex C provides details on ISCED, UOE, and COFOG categories.

Table 3 shows the list of the reporting standards that analysts can reference when preparing reports.

TABLE 3

Cost study reporting standards

Reporting area	Recommended reporting standards
A. Details of the studied intervention	1. Describe the intervention objectives and theory of change. 2. Specify the target population and geographic scope. 3. Describe the implementation model and delivery mechanisms, including the dosage, frequency, and duration of program delivery. 4. Identify implementing organizations and funding sources. 5. Specify the implementation period covered by the analysis. 6. Clarify whether the intervention is a pilot, demonstration, scale-up, or mature operational program. 7. Provide sufficient detail to allow comparison across interventions and contexts.
B. Cost study design decisions	1. State the objectives of the cost study. 2. Specify the type of analysis conducted (cost analysis, cost-efficiency analysis, cost-effectiveness analysis, cost-benefit analysis, etc.). 3. Specify the analytical perspective(s) used (societal, funder, implementer, household, etc.). 4. Identify the costing method used (ingredients method, activity-based costing, expenditure analysis, hybrid approach, etc.). 5. Specify the time horizon covered by the analysis. 6. Explain treatment of capital costs, recurrent costs, overhead, and indirect costs. 7. Clarify treatment of research and evaluation costs. 8. Report the discount rate used and justify its selection. 9. Clearly state the scale of the program (i.e., how many people were reached) at which costs were estimated. 10. State all finding limitations due to the study design.

[10] UOE data collection on formal education is outlined in the "Manual on concepts, definitions, and classification" (2020).

TABLE 3

Cost study reporting standards (continued)

Reporting area	Recommended reporting standards
C. Cost data collection details	1. Identify all data sources used, including budgets, expenditure records, procurement systems, payroll systems, interviews, surveys, administrative records, and secondary sources. 2. Specify whether data collection was concurrent or retrospective. 3. Describe the period during which data were collected. 4. Explain procedures used to collect, validate, and triangulate cost data. 5. Describe how shared costs and in-kind contributions were identified and recorded. 6. Report missing data and explain how missing information was addressed. 7. Identify any proxy values, assumptions, or imputations used during data collection.
D. Cost analysis-related decisions	1. Describe allocation methods for shared costs and overhead. 2. Explain methods used to value donated goods, volunteer time, and other in-kind contributions. 3. Specify inflation adjustments, amortization and depreciation details, exchange rates, and price years used. 4. Describe discounting procedures and annualization of capital costs. 5. Explain how unit costs and cost-effectiveness ratios were calculated. 6. Define beneficiary denominators used in calculations and, if being paired with impact estimates in a CEA/CUA/CBA, ensure that the denominators used in estimations match.
E. Appropriate use of findings	1. State the intended uses of the findings (budgeting, operational management, scale-up planning, comparative analysis, policy prioritization, etc.). 2. Explain important study limitations and contextual factors affecting interpretation, in particular relating to comparisons with other estimates. 3. Clarify which stakeholder perspective(s) the findings represent. 4. Avoid presenting findings as universally generalizable without appropriate contextual qualification.
F. Details of calculations	1. Whenever possible, provide detailed calculations in annexes, appendices, spreadsheets, or supplementary files. 2. Include total costs of the intervention, costs per participant (intended, reached, or both), incremental costs of the intervention (where applicable with multiple intervention arms), and cost breakdown by resource type and by stakeholder involved. 3. Include cost tables, assumptions lists, price schedules, allocation formulas, and sensitivity analyses. 4. Provide sufficient methodological detail to allow replication and secondary analysis. 5. Use standardized reporting templates where feasible to support comparability across studies. 6. Report costing information for interventions regardless of whether outcome findings are statistically significant. 7. When confidentiality restrictions prevent full disclosure, provide enough methodological explanation for readers to understand how estimates were produced.

TABLE 3

Cost study reporting standards (continued)

Reporting area	Recommended reporting standards
G. International classification	1. Identify the ISCED level(s) to which the intervention, program, or reform applies. 2. Identify the relevant COFOG education function(s) under which the program or expenditure would be classified. 3. Use UOE terminology when reporting education programs and education statistics to ensure consistency with internationally reported data.

STANDARD: REPORTING ON THE DETAILS OF THE COSTED INTERVENTION AND SPECIFICS OF ALL DECISIONS RELATING TO COST DATA COLLECTION, ANALYSIS, AND USE.

USEFUL RESOURCES:

- CAP's "Project Cost Analysis Guidelines" provides highly practical guidance on documenting costing assumptions, reporting perspectives, categorizing costs, handling shared costs and in-kind contributions, structuring cost tables, and presenting results transparently. The appendices, templates, and worked examples are particularly useful for practitioners preparing real-world costing reports.

- 3ie's "Measuring Cost-Effectiveness in Impact Evaluation" is useful for analysts conducting cost-effectiveness work linked to impact evaluations. The handbook provides step-by-step guidance on documenting assumptions, reporting perspectives, handling uncertainty and sensitivity analyses, aligning costing with outcome estimands, and structuring transparent reporting for comparative analysis. It is also especially strong on issues of comparability and reproducibility across studies.

- "Four New Ideas for Systematic Cost-Effectiveness Analysis" (Brown & McIntosh, 2025) focuses specifically on improving reporting practices for future synthesis and meta-analysis. It introduces practical ideas such as costing pre-analysis plans, standardized reporting templates, explicit reporting of perspectives and estimands, and the publication of costing data even for studies with null findings. It is particularly valuable for analysts seeking to make their cost studies more transparent, reusable, and comparable across contexts.

Dissemination best practices

The value of cost evidence depends on whether findings are effectively communicated to the audiences most likely to use them. Dissemination should not be treated as a final administrative step, but rather as an integral part of the overall costing process and evidence-to-policy pathway. Cost study reports should be accessible, transparent, and tailored to their specific audiences. Ideally, dissemination should include sufficient methodological detail to support interpretation and use of findings, while also translating technical results into practical implications for decisionmaking. **Dissemination efforts should begin early in the study process through stakeholder engagement at the study design phase**, costing pre-analysis plans, and regular communication with intended users of the evidence. This would also aid in the implementation of the study throughout all its phases.

Desirable dissemination avenues include:

- **Policy fora:** government briefings, ministry working groups, donor coordination platforms, parliamentary committees, and financing discussions.
- **Academic journals, think-tank reports, and conferences:** peer-reviewed publications, technical reports, working papers, and conference presentations that contribute to cumulative knowledge and methodological advancement.
- **Practitioner fora:** implementation networks, NGO communities of practice, technical workshops, operational learning events, and implementation-focused webinars.
- **Advocacy fora:** civil society coalitions, education campaigns, advocacy briefs, and stakeholder engagement platforms focused on financing, equity, or system reform.
- **Media:** policy blogs, op-eds, press briefings, podcasts, social media, infographics, and other public communication channels that help broaden understanding of education financing and value-for-money issues.

Because dissemination strategies depend heavily on the study objectives and vary considerably across contexts and studies, we propose a best practice here rather than a standard.

BEST PRACTICE: ENSURE THAT COST EVIDENCE IS COMMUNICATED EARLY, TRANSPARENTLY, ACCESSIBLY, AND THROUGH MULTIPLE COMPLEMENTARY CHANNELS TAILORED TO THE NEEDS OF DIFFERENT DECISION-MAKING AUDIENCES.

USEFUL RESOURCE: "Four New Ideas for Systematic Cost-Effectiveness Analysis" (Brown & McIntosh, 2025)

Conclusion and next steps

Strengthening the generation and use of cost evidence in global education and ECCE will require more than harmonized technical standards; it will require sustained organizational commitment, leadership support, and coordinated action across governments, funders, implementing organizations, researchers, and advocacy communities. Cost evidence becomes most useful when it is embedded into routine planning, implementation, monitoring, evaluation, and decisionmaking processes rather than treated as a one-time technical exercise. Organizations should successfully institutionalize cost measurement, invest in clear policies and guidance, dedicated staffing and technical capacity, standardized reporting systems, and leadership structures that require or actively encourage the use of cost evidence in strategic and operational decisions.

Leadership plays a particularly important role in shaping organizational culture around cost evidence generation and use. Leadership buy-in and active advocacy are essential components for implementing cost-related policies, protocols, and processes. Senior leadership within ministries, donor agencies, research institutions, and implementing organizations can help normalize the expectation that major education and ECCE investments should routinely generate and use cost evidence alongside evidence on outcomes and implementation quality. Leadership commitment is also critical for allocating resources for cost data systems, staff training, methodological development, and dissemination activities. Without this institutional commitment, cost evidence generation often remains fragmented, underfunded, and dependent on individual champions rather than embedded organizational practice.

Funders, governments, and implementing organizations each have distinct but complementary responsibilities in strengthening the ield.

Funders are essential to spurring progress by requiring and adequately resourcing cost analysis as part of program design, implementation, and evaluation. Funders can also require publication and dissemination of cost study findings that they fund.

Governments can strengthen routine use of cost evidence in budgeting, sector planning, scale-up decisions, and accountability systems while investing in national capacity for cost analysis and data management.

Implementing organizations and researchers can contribute by improving transparency and standardization of reporting, publishing findings regardless of program effectiveness results, sharing calculation methods and assumptions, and integrating cost measurement into routine monitoring and learning systems.

Across all stakeholder groups, collaboration and data sharing will be essential for improving comparability, reducing duplication of effort, and building cumulative knowledge across contexts and interventions.

The education and ECCE sectors face growing pressure to achieve better outcomes with limited and uncertain resources. Meeting this challenge will require collective commitment to generating, sharing, interpreting, and responsibly using high-quality cost evidence. Cost evidence alone cannot determine policy priorities or replace broader considerations of equity, feasibility, quality, and political context, but it is an essential part of making education investments more effective, sustainable, and responsive to the needs of children and communities. Advancing this agenda will require **sustained collective action across all stakeholders** to build a stronger culture of transparency, learning, and evidence-informed resource use throughout the global education and ECCE sector. This guidance and other resources developed by the Taskforce aim to support this action through harmonizing standards, garnering commitment, ensuring access to key tools and resources, and strengthening capacity across the sector.

Annex A. Resources and references

Key resources

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Annex B. Glossary

Terms relating to the concept of "cost" and "cost analysis"

Term	Definition
Cost	Economic value of all resources—financial and non-financial, purchased and contributed, public and private—expended to implement a program. It includes cash expenditures, the value of in-kind contributions, and the opportunity cost of resources diverted from other uses. Cost is always defined relative to a stated perspective and a clearly specified program or intervention. The economic cost is distinguished from financial cost which is the actual expenditures or monetary outlays incurred by an organization, government, donor, or household.
Cost analysis	Systematic analysis and interpretation of cost data to answer specific programmatic, research, or policy questions. It is a necessary first step in any economic evaluation but is itself distinct from analyses that also compare costs to outputs or outcomes.
Capital cost	Costs associated with long-term assets such as infrastructure, equipment, or vehicles.
Cost category	Standardized grouping of costs such as personnel, training, transport, infrastructure, or materials.
Cost driver	Resource or factor responsible for a substantial portion of total costs.
Direct cost	Costs that can be clearly attributed to implementing a specific intervention, activity, or program component.
Economic costs	Full value of all resources used to implement a program, including both financial costs and the value of non-financial contributions—donated goods, subsidized inputs, volunteered time, and any other resource that has value even if it was not purchased.
Economic evaluation	Economic evaluation is the systematic comparison of the costs and impacts of two or more alternative courses of action, undertaken to assess and compare their relative value and inform decisions about the allocation of resources. Cost-effectiveness and cost-benefit analyses are examples of economic evaluation.
Expenditure	Amount of money spent to develop and/or implement an education program, as recorded in accounting or financial reporting systems.
Financial cost	Actual expenditures or monetary outlays incurred by an organization, government, donor, or household.
Fixed cost	Costs that remain relatively stable regardless of the number of beneficiaries or level of output over a defined period.
In-kind contributions	Goods, services, labor or other non-cash resources that are donated or provided at below-market rates by governments, communities, families, or other parties, and which therefore do not appear as expenditures in a program's financial records.

Term	Definition
Incremental cost	Additional costs associated with a program above and beyond what would have been spent in the absence of that program
Indirect cost / overhead	Shared or administrative costs that support multiple activities and cannot be attributed exclusively to one intervention.
Opportunity cost	The value of a resource in its best alternative use.
Personnel cost	Costs associated with staff salaries, wages, benefits, stipends, or contracted labor.
Recurrent / recurring cost	Ongoing operational costs required for continued implementation of the program.
Resource utilization	Quantity of resources consumed in delivering an intervention or activity.
Start-up cost	One-time or initial costs incurred before or during early implementation.
Unit cost	Average cost associated with a defined unit such as a learner, teacher, classroom, school, or program participant.
Variable cost	Costs that change as participation, scale, or output changes.

Terms relating to methodologies of cost analysis

Term	Definition
Ingredients method	Costing approach that identifies all inputs required for implementation of a program, estimates their quantities, and assigns monetary values to them based on extant data.
Perspective	Standpoint from which costs are counted in an analysis. Because different stakeholders bear different costs, the same program can produce different cost estimates depending on the perspective chosen. Common perspectives include the implementer or provider, the funder or donor, the government, the program participant or family, and society as a whole.
Sensitivity analysis	Technique used to test how much the conclusions of a cost analysis change when uncertain assumptions or variable inputs are adjusted within a plausible range.
Discounting	Converting the value of costs (and sometimes benefits) that occur in the future into their present-day equivalent, to account for the fact that money available today is worth more than the same amount received in the future.
Inflation adjustment	Converting costs incurred in different calendar years to a single common price year, so that comparisons across time periods are meaningful and not distorted by changes in the price level.

Term	Definition
Cost capture	Systematic process of collecting all cost data—financial and non-financial—during the implementation of a program, organized according to a predefined structure.
Activity-based costing	Costing methodology that traces resources to program components ("activities") and then assigns the costs of those activities to outputs, outcomes, beneficiaries, or other cost objects based on their actual or estimated use, as defined by the project theory of change or logical framework.
Cost-economy analysis	Process of systematically identifying, recording, and documenting all relevant costs associated with a program or intervention.
Cost-effectiveness analysis (CEA)	Economic evaluation method that compares the costs of a program relative to the outcomes achieved, where outcomes are measured using a credible counterfactual.
Cost-efficiency analysis	Cost analysis method that calculates the cost of producing a unit of program output—for example, the cost per teacher trained or the cost per child enrolled.
Cost-benefit analysis (CBA)	Economic evaluation method that converts both costs and program outcomes into monetary values, enabling a direct comparison of what is spent against what is gained.
Cost-feasibility analysis	Analysis that examines whether a program or intervention can realistically be financed, implemented, and sustained within existing resource constraints.
Cost-utility analysis (CUA)	Economic evaluation method that compares program costs to a composite measure of utility that combines two or more dimensions of outcome into a single index such as learning-adjusted years of schooling (LAYS).

Other related terms

Term	Definition
Amortization	Systematic allocation of the cost of an intangible asset over its useful life.
Annualization	Conversion of a capital asset's acquisition cost into an equivalent annual cost over its useful life, accounting for both depreciation and the opportunity cost of capital.
Budget	Financial plan that estimates the resources and expenditures required to implement a program, activity, or organization over a specified period of time. Budget is a projection of future financial costs incurred by an organization, government, donor, or household.
Depreciation	Systematic allocation of the cost of a tangible asset over the periods expected to benefit from its use.
Ingredients	All resources that are required to produce an educational intervention, including labor, materials, equipment, facilities, and time.

Term	Definition
Inputs	All resources used to implement a program, including labor, materials, equipment, facilities, and time. “Inputs” and “ingredients” are used interchangeably across the sources reviewed, with “ingredients” being the preferred term in the U.S. education research tradition and “inputs” more common in the international development literature.
Outputs	Goods or services directly produced and delivered by a program, expressed in countable units—such as the number of teachers trained, the number of learning materials distributed, or the number of children who attended a program. Outputs are the direct, observable products of program activities.
Outcomes	Changes in conditions, behaviors, or capabilities that a program is designed to produce—such as improvements in children’s literacy scores, increased school enrollment, or enhanced parenting practices. Outcomes represent the program’s intended impact and are the measure against which cost-effectiveness is assessed.
Budget	Monetary amount allocated for a program or project.
Price	Monetary value of one unit of a specific good or service in the market.
Shadow price	Estimated monetary value assigned to a resource for which no market price exists or for which the market price does not accurately reflect its true value, such as volunteer time, community-contributed labor, or the use of a government building.
Benchmarking	Comparing costs or outcomes across programs, interventions, or contexts.
Value for money	General principle rather than a single analytical method that describes the optimal use of resources to achieve intended outcomes. When used in a technical sense, it encompasses cost-economy, cost-efficiency, and cost-effectiveness of the investment relative to alternatives interpreted within the broader socioeconomic context in which the program is implemented.

Annex C.
International frameworks for classifying and reporting education programs and expenditures

Education systems differ substantially across countries. The same program may have different names, span different grades, or belong to different parts of the education system. Governments also organize and report education expenditures differently. Without common definitions, comparing costs across studies, countries, or over time becomes difficult.

To address this challenge, the international education community has developed common frameworks for classifying education programs, classifying government expenditures, and reporting education statistics. These frameworks provide a common vocabulary that improves transparency, comparability, and interpretation of cost studies.

International Standard Classification of Education (ISCED 2011)

The International Standard Classification of Education (ISCED 2011), developed by UNESCO, is the international framework for classifying education programs according to their level and educational content. Rather than relying on country-specific school names or grade structures, ISCED provides a common way to describe where a program fits within the education system. Most international education statistics are organized using ISCED levels.

ISCED level	Standard terminology
ISCED 0	Early childhood education
ISCED 1	Primary education
ISCED 2	Lower secondary education
ISCED 3	Upper secondary education
ISCED 4	Post-secondary non-tertiary education
ISCED 5	Short-cycle tertiary education
ISCED 6	Bachelor's or equivalent
ISCED 7	Master's or equivalent
ISCED 8	Doctoral or equivalent

Classification of the Functions of Government (COFOG)

The Classification of the Functions of Government (COFOG), developed by the United Nations and used by OECD and other key stakeholders, classifies government expenditures according to their primary purpose. Within the education sector, COFOG distinguishes the following functions.

COFOG code	Education function
09.1	Pre-primary and primary education
09.2	Secondary education
09.3	Post-secondary non-tertiary education
09.4	Tertiary education
09.5	Education not defined by level
09.6	Subsidiary services to education
09.7	Research and development in education
09.8	Other education-related functions

COFOG provides a standardized way to classify education expenditures within government budgets and public finance statistics. It is widely used in national accounts and international comparisons of public expenditure.

UNESCO-OECD-Eurostat (UOE) data collection

The UNESCO-OECD-Eurostat (UOE) data collection is the international reporting system through which countries annually submit education statistics. Unlike ISCED and COFOG, UOE is not a classification system. Instead, it provides standardized definitions, reporting procedures, and data tables that enable countries to report education statistics in a consistent manner. UOE uses ISCED classifications as its underlying framework.

The UOE data collection covers the following broad areas:

UOE reporting area	Examples of reported information
Students	Enrollment, participation, graduates, educational attainment
Educational institutions	Number and type of institutions
Teachers and personnel	Teachers, academic staff, and other education personnel
Finance	Public and private expenditure, household expenditure, current and capital expenditure, sources of funding
Learning environment	Class size, pupil-teacher ratios, instructional time
International mobility	International and foreign students

Statistics published by UNESCO, OECD, Eurostat, and many World Bank databases are largely based on the UOE reporting framework and are therefore comparable across countries.

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