



E4L Guidance on Cost Evaluation

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1. Introduction

When comparing the relative merits of different approaches to improving teaching and learning, it is important that practitioners consider the effectiveness and cost of the approach together in a combined estimate of cost effectiveness. They need to know which approaches will secure the biggest improvements in their pupils' learning for the lowest cost. It is therefore important that E4L-funded evaluations collect cost data and report the cost per pupil of the intervention, and that this is done using a common approach so that fair comparison can be made between different interventions.

This document clarifies the E4L's expectations regarding cost evaluation. It has been developed by the Education Endowment Fund (EEF) through consultation with their Evaluation Advisory Group and Panel of Evaluators, and experts in cost evaluation. It provides guidance on how to collect cost data for E4L, combine this data in a single estimate of the cost per pupil of the intervention, and report cost information in the final evaluation report. EEF's examples are used in this guidance on costing the evaluations. Feedback on the document and proposed approach is welcomed; please email pho@socialventures.com.au with any comments or suggestions.

This guidance should be applied to evaluations of both early years and school-based interventions. The guidance refers to schools and teachers throughout, but it can also be applied to early years settings and practitioners.

2. Planning for cost evaluation

The evaluator is responsible for collecting cost data and combining this data into an estimate of the cost of the intervention. When bidding to run E4L-funded evaluations, evaluators should state how they plan to collect cost data. After their bid has been accepted, the trial protocol should state how evaluators plan to conduct their cost evaluation. Collecting cost data requires careful planning and collaboration with the delivery organisation and should be considered in the initial evaluation set up meetings.

3. Basic principles of cost evaluation

Evaluators should collect information about the cost of the intervention as it was delivered in the evaluation. However, if the program developer intends to increase or decrease the cost of the intervention when it is offered to schools in the future, evaluators should record this intention in the evaluation report.

In E4L-funded projects the cost to schools of purchasing the intervention is often subsidised by the E4L, the program developer or another funder. The cost evaluation should assume that this funding is not being provided and that schools are paying for the total costs they would otherwise bear. E.g. A school might only pay for 40% of the costs of the intervention as it was delivered in the E4L-funded trial, because E4L or the program developer pay the rest. The evaluator should calculate the cost to the school if they had been paying the entire costs of delivering the intervention. This might require the evaluator to ask E4L for information about the funding arrangements for the project.

Cost data should be collected from a range of cost perspectives. Evaluators should consider whether the intervention creates costs for schools, early years settings, parents, local authorities, and other actors. The estimate of cost per pupil should be calculated from the school's perspective – this is discussed in part 6 of this guidance.

4. Different types of cost data

Evaluators should collect information about the following costs. Some of these costs should be reported in financial units, some should be reported in units of time.

DIRECT, MARGINAL COSTS

Evaluators should collect the direct, marginal costs of the intervention. These are costs that are directly attributable to the schools' participation in the intervention. Examples of the costs that should be collected are set out below.

Financial costs

Some of the direct, marginal costs of the intervention will be paid for using money:

- Fees for services (e.g. sessions of tuition, Continuing Professional Development (CPD), ongoing support and monitoring provided by program deliverer).
- Salary costs, if the intervention requires that schools purchase more staff time,

- either by hiring new staff or extending the hours of current staff.
- Purchasing (or printing/photocopying) resources, materials and equipment. This might include textbooks, hand-outs, or digital technology.
 - Travel/subsistence.
 - Subsidies for parental costs (e.g. for disadvantaged families).

Extra time

There are other costs that are not 'paid' using money, but with time and effort. These include:

- staff time dedicated to delivering the intervention
- volunteer time that is contributed

It is important to collect and report these costs if they are significant, but they should be expressed as the amount of time spent by staff/volunteers. Evaluators should estimate the time that staff spend delivering the intervention, excluding any time spent on requirements of the evaluation (e.g. delivering testing).

Supply cover

If an intervention requires that teachers must miss some lessons to attend training, the schools must arrange for those lessons to be covered. Schools arrange lesson cover in different ways.

Approaches where the schools incur a financial cost from participating in the intervention:

- Hiring a supply teacher

Approaches where the school does not incur a financial cost, but provides cover by re-allocating existing resources:

- A permanent member of staff acts as a supply teacher. In secondary schools, teachers often have a certain number of periods a week where they provide cover using a TA. This is not considered to be good practice by many, but does happen in some schools.
- In primary schools, classes are often split or doubled in size.

It is very useful to schools to know how much cover was required by the intervention, but the variation in how schools arrange cover means it is more useful for schools for this to be expressed in terms of how much time schools needed to arrange cover for. Evaluators do not need to estimate an average financial cost for this cover.

PRE-REQUISITES

The evaluator should also report the cost of resources that are necessary for implementation, but for most schools do not represent a marginal cost from participation in the intervention. The evaluator should still report the resources required for implementation, as there may be a small minority of schools that have limited or no

access to them. The decision about which costs should be considered marginal costs and which are pre-requisites should be made by the evaluator. Some interventions may require access to digital technology, such as computer suites, tablet computers, or projectors. Most schools will have access to this technology, so the evaluator may decide to not count it as a marginal cost from the intervention and will instead report it as a pre-requisite. If the intervention requires that schools purchase new software that they do not already own, this should be reported as a marginal cost.

5. Data collection methods

The collection of cost data is better suited to the methods involved in process evaluation than those in impact evaluation.

DATA FROM THE DEVELOPER

In many cases some data, such as the fees charged to schools or the time that staff spend directly on the intervention, can easily be collected from the developer.

INTERVIEWS/CASE STUDIES

It is often very helpful to first understand the issues and context through visits to projects, observations and interviews. In an EEF's project – the evaluation of Oxford University's "Improving Numeracy and Literacy" project, the National Foundation for Educational Research (NFER) used preliminary interviews to discover that the intervention required a lot of photocopying. The NFER team added a question to their survey questionnaire to further investigate the costs of photocopying and uncovered an average photocopying/printing cost of around £125 per school.

SURVEYS

Surveys can be a useful method for collecting cost data, but complex cost questions can be a barrier to completion rates, and they might not always be necessary. Questions should focus on the areas with least information. For example, it is often easy to work out the number of days of supply cover required from the time required for teachers to attend training. In the trial of the "Improving Numeracy and Literacy" project, NFER achieved a high response rate by giving surveys to teachers while the test administrators administered the outcome test.

PRO FORMA SPREADSHEETS

Pro forma spreadsheets that are sent to the developer to collect cost information tend to be unhelpful and should be avoided in most cases. The best cost information comes from engaging in discussion with the developer so that they understand your motivation for the questions.

6. Creating a cost per pupil estimate

Evaluation reports should estimate the cost per pupil per school year of the intervention. The cost estimate should be calculated as a per-pupil cost for all types of evaluation, including whole-school interventions.

For whole-school interventions, the cost per school should be divided by the average number of pupils per school in the participating schools to give the cost per pupil.

COST PERSPECTIVE

The cost per pupil estimate should be calculated from the perspective of schools. This means that costs should only be included if they are borne by schools taking part in the intervention. Others (parents, pupils, local authorities) might have increased costs from participation in the intervention, but these should not be included in the estimate. If there are substantial costs to parents, pupils or anyone else not employed by the school, they should be recorded and stated separately in the costs section of the report.

TIME

Evaluators should estimate the average cost per year of the intervention if it is repeated over three years. This is important because many projects will have high start-up costs in the first year, but low running costs in subsequent years. E.g. evaluations of two different EEF projects (A and B) showed that they had exactly the same impact on attainment. Project A requires teachers to take part in a training course costing £1000, but then has minimal running costs of £50 a year. Project B requires schools to pay an annual subscription of £550. Table 1 shows how over one year, Project B is the more cost-effective intervention, but if the projects run for two years or more, Project A is more cost-effective. This example demonstrates how, unless start-up costs are spread out over a longer period of time, projects with high start-up costs and low running costs might be unfairly penalised.

Table 1 Cumulative costs of EEF projects A and B

	Year 1	Year 2	Year 3
Project A	£1000	£1050	£1100
Project B	£550	£1100	£1650

Three years is chosen as an appropriate timescale for reporting the cost per pupil over the long term, because in most interventions the main start-up cost will be training for teachers. The training is an investment in the teacher, but the teacher might leave the school. Teachers in England complete an average of 6.7 years at each school they work at before moving school, leaving teaching or retiring¹. This means that at any particular point in time a teacher will stay in the school for, on average, 3 more full years. Three

¹ Allen, R., Burgess, S. and Mayo, J. (2012). The teacher labour market, teacher turnover and disadvantaged schools: new evidence for England. CMPO Working paper, 12/29

years is therefore the average amount of time that will pass before start-up costs have to be paid again, and is a reasonable length of time over which to assess the cost of an intervention.

The following example illustrates how evaluators should calculate the cost per year over three years. An intervention has start-up costs of £300 per pupil per year and running costs of £200 per pupil per year.

Table 2 Start-up and running costs

Cost	Cost per pupil (£)
Start-up cost	300
Running costs per year	200
Total cost in first year	500

Table 3 shows how evaluators can calculate the average cost per year over several years. The cumulative cost per pupil is calculated and then divided by the number of years to give an average cost per year.

Evaluators should use an equivalent table to demonstrate how the cost per year of the program changes over time.

Table 3 Cost per year over multiple years

Number of years using program	Cumulative cost per pupil (£)	Average cost per pupil per year (£) (cumulative cost per pupil/number of years)
1 year	500	500
2 years	700	350
3 years	900	300

This table demonstrates that the cost per pupil per year over three years is £300.

INFLATION

If the evaluator uses unit costs (such as the average teacher salary) in the creation of the cost per pupil estimate, then they must come from the same year as the program was delivered. The evaluator may need to inflate costs from other years if no suitable cost data can be found from the relevant year.

WHAT SHOULD BE INCLUDED IN THE ESTIMATE?

This estimate should aggregate the marginal, financial costs of implementing the program.

WHAT SHOULD NOT BE INCLUDED IN THE ESTIMATE?

- Increased staff workload/time. The impact on staff time should be reported separately in units of time.
- Pre-requisite costs. The cost of resources that are required to implement the intervention, but are already widely possessed by schools.
- Overhead costs should not be included in the cost-per-pupil estimate.
- Evaluation costs. The costs of carrying out the evaluation – including testing and school recruitment – should not be included.
- Development costs. The estimate should not include costs of developing the intervention. E.g. the costs of piloting the intervention before the main trial or the cost of hiring a consultant to help develop materials.

7. Reporting

It is important that the following guidelines on reporting are followed to ensure costs are reported transparently and are comparable across different evaluation reports. More information about communicating cost information in the evaluation report is available in the evaluation report template.

EXECUTIVE SUMMARY

The executive summary should state the cost per pupil per year of the intervention (as it was calculated in the previous section), and include a very brief description of the composite parts of the estimate. E.g. “The initial training costs were £450 and schools paid an annual subscription of £50.” If applicable, the executive summary should also include estimates of the staff time required to deliver the intervention and the amount of supply cover required. If the evaluation is of a whole-school intervention, evaluators should also report the cost per school.

EVALUATION REPORT

Evaluation reports should be transparent about the methodology used to estimate the cost per pupil. Evaluators can use the methodology section to outline how they collected cost data and constructed the cost-per-pupil estimate, and any assumptions that were made (e.g. the number of pupils in a school).

It is important that evaluators are transparent about the sources of cost data and estimates:

- Evaluation reports must state whether the cost-per-pupil estimate was calculated by the delivery organisation or the independent evaluator. Some evaluations that preceded this guidance might be relying on the delivery organisation to provide a cost-per-pupil estimate. If this is unavoidable, it is important to state this in the cost section of the report.
- Evaluation reports should also provide information about the source of the data

underpinning the overall cost estimate. The data could have come from one of the following sources:

- Actual cost (e.g. if they are already selling the product).
- Estimated by the delivery organisation. Many evaluations are underway using the old guidance, so might be relying on the developer to collect all cost data.
- Estimated by the evaluator.

The cost per pupil per year estimate and any other pertinent cost data (such as pre-requisite costs, costs borne by organisations and people that do not share the cost perspective of the school, the program developer's intended future costs, the amount of staff time required, the amount of supply cover required) should be described underneath the Costs sub-heading of the evaluation report template.

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