



REPUBLIC OF ESTONIA  
MINISTRY OF EDUCATION  
AND RESEARCH



Implementing Education Policies

# **Enhancing data informed strategic governance in education in Estonia**

Output 1.2.

Note with analytical framework to support the mapping of national data sources and indicators

14 February 2020

# Table of contents

1 Introduction	3
2 General description of the framework	4
3 Application of the framework to Estonia's 2035 strategy	5
4 Establishing outputs for Estonia's 2035 strategy	7
5 Using the framework for data mapping	9
<b>Figures</b>	
Figure 1. Framework for Estonia's 2035 Strategy	10

# 1 Introduction

This note constitutes the Output 1.2. of the project “Enhancing data-informed strategic governance in education in Estonia”, based on an agreement between Estonia, the OECD, and the European Commission’s DG Reform to support the development of the Estonian Education Monitoring System. The note has been prepared by the OECD and updated with comments by the project Advisory Group.

The note presents an OECD conceptual framework, an overarching architecture that can be used to link Estonia’s existing indicators to the new 2035 education strategy. The framework is detailed according to the process levels – general objective, strategic goals, outcomes, outputs, inputs – and the institutional actors – national government, school owners and schools. This work will help clarify which data sources can be used to monitor each of the goals and where there may be data gaps. As such, this OECD conceptual framework constitutes the stepping-stone of the analysis of data use and data needs relative to the Estonian Education Strategy. It will organise and shape the further analysis through a two-step process.

First, the mapping of the current education strategy and related indicators onto the conceptual framework will allow observing how different education objectives are interdependent, which indicators support their achievement, and which parts of the strategy may not be supported by adequate indicators. This exercise will help clarify which data sources can be used to monitor each of the goals and where there may be data gaps (Output 1.3.1). Second, a consultation with stakeholders will provide feedback on which indicators are used, underused, or misused, and what indicators are needed to support local development (Output 1.3.2).

Section 2 provides a general description of the framework, and definitions of its main concepts. Section 3 applies the main concepts to the 2035 Estonian Education, and Section 4 reviews the links between the different elements of the model. Section 5 concludes with a visual representation of the framework.

## 2 General description of the framework

The framework presented in Figure 1 provides an organizational structure in terms of processes (impact, outcomes, outputs and inputs) and the institutional actors.

The framework highlights the fact that all of the processes and institutional actors are interconnected and interdependent. However, it cannot capture all of the potential factors that can influence a country's education system. Indeed, the implementation and outcomes of education policies are not as straightforward as conceived in a framework. Education results are related not only to education policies, but also to other factors and other non-education policies, including for instance parental engagement and reading at home, social and economic policies.

A general description of the structure of the framework is described below.

### The process levels

- *Impact*: Long-term, often indirect, results of the development intervention.
- *Outcomes*: They refer to the likely or achieved effects of an intervention's outputs. This is the second level of results (after outputs) associated with a policy and refers to the medium term consequences of the policy. Outcomes should be related to the policy goal or aim.
- *Outputs*: They refer to changes resulting from the intervention which are relevant to the achievement of outcomes. These are the first level of results – often more short-term – associated with a policy. An easy way to think about outputs is to quantify the policy activities that have a direct link to the policy goal. Outputs should be measurable or observable, and they can be thought of as operational proxies for the success of the outcome.
- *Inputs*: They ensure that it is possible to deliver the intended results of a policy. In this framework, inputs include both the traditional inputs (financial, human, and material resources) and activities (policies implemented or work performed through which the traditional inputs are mobilised).

### The institutional actors

The institutional actors included in the framework should be representative of the main decision-making actors shaping the country's education system. These will most likely include levels of government and educational institutions, but may vary depending on the governance of the education system, the distribution of responsibilities across levels of government and the level of institutional autonomy. They may also include partners in the non-educational sector who may provide inputs or be influenced by the outputs of educational policy.

# 3 Application of the framework to Estonia's 2035 strategy

Figure 1 organizes Estonia's 2035 strategy using the framework described in the previous section. This section explains how each of the processes and actors will be adapted to the Estonian context and strategy.

## The process levels

The four process levels of the framework are defined as follows:

- *Impact*: In the case of Estonia's 2035 strategy, this level is divided into two: one overarching general objective and three strategic goals:
  - *General objective*: This is set by Estonia's 2035 strategy: "To equip the population of Estonia with the knowledge, skills and attitudes that prepare people to fulfil their potential in personal, occupational and social life and contribute to promoting the quality of life in Estonia as well as global sustainable development."
  - *Strategic goals*: These correspond to the three goals set by Estonia's 2035 strategy as essential for achieving the General objective.
    - Goal 1: "Learning opportunities are diverse and accessible, and the education system enables smooth transitions between different levels and types of education."
    - Goal 2: "The approach to learning and teaching is learner-focused, forward-looking and helps learners to succeed in life."
    - Goal 3: "Learning options are responsive to labour market needs."
- *Outcomes*: These correspond to the 3-5 outcomes under each strategic goal. These have also been set by Estonia's 2035 strategy. Examples include: "Promote internationalization and learning mobility to diversify learning opportunities and improve the quality of education"; "Ensuring flexible learning opportunities, accessibility of high-quality education and supported learning in order to reduce drop-out rates and to exploit everyone's full potential."
- *Outputs*: This is the only process level which is *not* set by Estonia's 2035 strategy. They correspond to the changes that are expected from the inputs provided, and that should be monitored in order to ensure the achievement of the outcome. Given that the outputs are the main focus of this project, they are discussed in more detail in the section "Establishing outputs for Estonia's 2035 strategy".
- *Inputs*: In the case of Estonia's 2035 strategy, inputs refer mostly to the policies considered necessary for the achievement of each of the outcomes. Some of these policies are already set in Estonia's 2035 strategy, but they may be additional policies and they may be changed, edited or replaced in the following months.

Examples of policies included in the strategy include: “Ensure the recognition of periods of learning mobility at all levels of education”; “Promote long-term international strategic cooperation”; “Create preconditions for the implementation of the single European education space”.

## The institutional actors

Four actors are included in the framework mapped to Estonia’s context. The first three actors (schools, school owners and national government) are responsible for the main institutional policies that will shape education in Estonia. The fourth actor (other partners), represent other institutions or stakeholders that may influence or be influenced by educational policies. Each of these actors are expected to provide inputs to achieve the established goals and to monitor their progress towards the expected outputs.

- *Schools*: Given the high level of school autonomy, this institutional level is of particular importance in Estonia.
  - *Examples of inputs*: teacher policies (recruitment, selection, induction, working conditions, etc.), school leaders, learning environments, evaluation and assessment
  - *Expected outputs*: school-level indicators and monitoring
- *School owners*: This refers to local authorities (city of Tallinn for example) or other institutions responsible for schools in Estonia.
  - *Examples of inputs*: teacher salaries, schools’ infrastructure, student distribution
  - *Expected outputs*: local-level indicators and monitoring; aggregation of institutional-level indicators for the institutions “owned” by school owner
- *National government*: The national government is responsible for the organization of the education system and for delivering policies relating to governance and funding.
  - *Examples of inputs*: policies on governance and funding
  - *Expected outputs*: system-level indicators and monitoring; the aggregation of local-level indicators and of institutional-level indicators
- *Other partners*: partners from the educational and non-educational sector. These include, among others, educational stakeholders and others such as labour market participants, social policy institutions and youth centres. The relevant partners may differ according to each of the outcomes.
  - *Examples of inputs*: social policies, youth policies, labour market policies, programmes organized by public libraries
  - *Expected outputs*: employment/unemployment rates, participation in interest-related activities

# 4 Establishing outputs for Estonia's 2035 strategy

The outputs in the framework provide the link between the inputs and the outcome. They correspond to the changes that are expected given the inputs and that are necessary in order to achieve the outcome.

Given an outcome, the outputs can be determined by trying to answer: “what are the observable changes that should take place for the achievement of this outcome?” For example, for the outcome “Promote internationalization and learning mobility to diversify learning opportunities and improve the quality of education”, some of the outputs could be:

- Increase in the share of tertiary students studying abroad
- Increase in the share of teachers with at least one experience abroad
- Increase in the share of students speaking a foreign language at least at level B2
- Increase in the share of international students who stay in Estonia a year after graduation
- School has a culture that promotes diversity and cultural exchanges

As mentioned, the outputs correspond to the specific aspects that will be monitored for the achievement of the outcome. These outputs may then be measured through indicators or through other instruments such as school visits and external evaluations. In the list of examples above, the first four outputs would most likely be measured by indicators while the last one may be more accurately monitored through other types of more qualitative instruments, such as reviews or evaluations. The best way to monitor a specific output will become clearer once the data mapping has been completed.

Filling in the output section of the framework will therefore require the following steps:

1. Determine the outputs (i.e. what should be measured?). This will be established taking into account the inputs from the strategy, but will not be limited to them.
2. Determine which of these outputs are best measured by indicators vs. other instruments (e.g. school visits).
3. Develop indicators to measure the outputs that can be measured through indicators.

## Links between processes and actors

The framework's design emphasizes the links between each of the processes (inputs, outputs, outcomes and goals) and between the four institutional actors.

## Links between institutional actors

A two-way link between the four institutional actors is established for both inputs and outputs. Indeed, the inputs and outputs of the four actors are interconnected and can significantly influence each other: institutions need to have the appropriate policies and funding in place, and the government and local authorities need institutions' feedback and suggestions to understand what works and what does not.

## Links between process levels

The process levels in the framework follow the traditional linear relationship where inputs → outputs → outcomes → goals → general objective.

However, the framework also emphasizes the lateral connections between the different inputs/outputs/outcomes/goals. In other words, the inputs needed to achieve a specific outcome may be the same or related to the inputs needed to achieve another outcome. The same is true for the outputs.

Likewise, the achievement of one strategic goal is connected to the achievement of another. For example, one of the aspects of strategic goal 2 is to have a “forward-looking” approach to learning, which is strongly linked to the strategic goal 3 of having “learning options that are responsible to labour market needs”.

# 5

## Using the framework for data mapping

The organization of Estonia's 2035 strategy using this framework will help clarify the types of information needed to monitor the progress and achievement of the strategy. In particular, it will help clarify the topics, education levels, and units of observation required to monitor progress with each of the outcomes. The framework will also help identify any potential data gaps.

Although the framework should help guide the data mapping exercise, it is not meant to completely restrict it. If new types of information are found that can be useful to monitor Estonia's General Objective, these can be used to tweak – in a limited sense – the policy activities or outcomes set in the strategy.

The data mapping exercise will also help clarify the level at which each of the outputs should be monitored (even if all data is then aggregated to the national level). Some indicators may be relevant to be measured at school-level, while others will only be relevant at the system-level.

Figure 1. Framework for Estonia's 2035 Strategy

