

Chapter 1

Overview: Lessons for collecting international education data for PISA for Development

This chapter summarises the main findings of the review of the current status of data collection and availability, at national education system level, in six PISA for Development (PISA-D) participating countries. The main findings indicate that: 1) participating countries are generally in a satisfactory condition, though uneven, for completing the PISA-D system-level questionnaire, and 2) they face cross-cutting challenges that are common to most countries, and which can be extrapolated to other middle-income and low-income countries. The chapter highlights data collection challenges, such as remodelling a country's data infrastructure to make sure that data is available in a single hub; and it identifies lessons learnt through the review, such as the need to consider modifications of the system-level questionnaire to avoid soliciting data and metadata that are already available at the international level.

Purpose of the report

The UIS was commissioned jointly by the OECD and the World Bank to assess the current status of data collection and availability, at national education system level, in six PISA-D participating countries. The UIS's role in this work was agreed with the other partners in the PISA-D project (as represented in the project's International Advisory Group), the OECD and the World Bank.

This report therefore responds to three key questions on the collection, availability and quality of system-level data and metadata for Cambodia, Ecuador, Guatemala, Paraguay, Senegal and Zambia:

1. What system-level metadata and data are currently available in PISA-D participating countries?
2. What is the current quality of system-level metadata and data?
3. What country-specific opportunities are there for capacity development in the PISA-D participating countries?

In addition to these questions, the report aims to provide technically sound and viable options for improving the international comparability of data, and to address the challenges identified in each country. This technical advice aims to: 1) ensure sound methodology and 2) minimise the burden on countries' respondents, in order to improve overall data quality and completeness.

Finally, this report aims to provide lessons learned – insights into common challenges for this group of countries; and to look forward, at potential challenges for other middle-income countries (MICs) and low-income countries (LICs) that may participate in PISA in the future.

From PISA to PISA for Development

PISA is an international comparative study co-ordinated by the OECD, assessing 15-year-old students' proficiency levels in reading, mathematics and science every three years in countries around the world. The assessment focuses particularly on functional knowledge and skills that will allow students to actively participate in society (OECD and UIS, 2003).

PISA was launched in 1997 and its first assessment cycle was held in 2000. It included all 28 OECD member countries of the time, plus 4 non-OECD countries (Carvalho, 2009). Having surveyed all the OECD countries, PISA sought to expand its coverage to more non-OECD members. Thus, by 2003, it had covered 11 non-member countries as well as members, which by then had reached its current number of 34. This expansion to include non-OECD countries continued in the following cycles: 27 in 2006, 45 in 2009, 31 in 2012; and 47 non-OECD countries in the 2015 cycle.¹

To respond to the growing interest generated by PISA's first cycle of assessments, in 2003 the OECD collaborated with UIS to publish a report, *Literacy Skills for the World of Tomorrow: Further Results from PISA 2000* (OECD and UIS, 2003) aimed at facilitating non-OECD countries' participation. According to Carvalho (2009), "this report argued

for a change in the political focus of the educational ‘inputs’ towards a focus on the learning ‘outcomes’, in an attempt to help these countries improve the quality of their students’ schooling and better prepare them to enter into an adult life of rapid change and heavy interdependence on a global scale.”

For a non-OECD country to participate, it must have sufficient technical knowledge to administer an international assessment test, and proof that it can cover all the participation costs. Countries must join two years before the start of the survey (Carvalho, 2009).

Some authors suggest that non-OECD countries choose to participate in PISA because they think it more relevant to be compared with OECD countries than with countries from a similar income group: comparing results would help emerging economies evaluate how far they are from the leading countries, and help them identify areas to improve in order to obtain similar results (Grek, 2009).

In 2013, the OECD and partners launched PISA-D, with the objective of identifying how PISA can best support evidence-based policy making in MICs and LICs, and contribute to the UN-led definition of global learning goals. PISA-D aims to increase MICs and LICs’ use of PISA assessments for monitoring progress towards nationally set targets for improvement; for analysing factors associated with student learning outcomes, particularly for poor and marginalised populations; for institutional capacity building; and for tracking international educational targets in the post-2015 framework, which is being developed within the UN’s thematic consultations. To do this, the OECD will use enhanced PISA survey instruments that are designed to be more relevant to MIC and LIC contexts, but which produce scores on the same scales as the main PISA assessment.²

Six countries are taking part in the PISA-D project cycle: Cambodia, Ecuador, Guatemala, Paraguay, Senegal and Zambia.

Overview and lessons

This assessment has two main conclusions. First, participating countries are generally in a satisfactory condition, though uneven, for participating in the PISA-D system-level questionnaire. Second, they face cross-cutting challenges that are common to most countries, and which can be extrapolated to other MICs and LICs.

General assessment

Despite the overall good assessment, not all the participating countries have the same ability to respond to the system-level questionnaire, just as they have different challenges in responding to the UIS questionnaires. Some countries seem to have a high level of data quality and availability, and data are managed in a fairly centralised fashion (Paraguay, for example); whereas others have an apparently decentralised way of managing the data collected (for instance Senegal). Generally, in the PISA-D countries, where data are managed centrally, they are managed better.

Generally speaking, the Latin American countries taking part in PISA-D are in a strong position to respond to the OECD system-level questionnaire. Cambodia, on its own, is potentially in good shape. Finally, Senegal faces particular challenges in terms of sectorial co-ordination.

But the context in which the international data collections operate in countries other than OECD or Statistical Office of the European Union (Eurostat) countries is very different. The relationship between national teams and international organisations is less institutionalised, and the submission of data (or its compliance to standards) is the result of teams' work plan priorities and time management, rather than a legislative obligation.

Lessons for PISA-D and middle-income and low-income countries more generally

There are cross-cutting challenges that are common to the six PISA-D participating countries, which could be extrapolated to other MICs and LICs.

The most obvious area for attention is countries' difficulty in providing data on **private expenditure on education**. This point is common in other MICs and LICs and could be a useful focus for technical collaboration. Statistics on education expenditure are regularly reported to UIS by countries through its education survey but coverage is limited – generally, MICs and LICs do not include private expenditure in their statistics.

Through its national integrated financial management information system, Zambia has a systematic process of documenting and tracking expenditure in public institutions, and in particular those under the Ministry. Although public expenditure data are made available in national annual statements, more complete coverage when reporting educational expenditure statistics to international organisations remains a challenge. Sector co-ordination wide between Ministries, including the collection of data from private institutions is a necessary component to improve the coverage of data reported to international organisations.

Another detected issue that affects dimensions of the system-level questionnaire is the fact that there are **discrepancies between policies and their implementation**. There seems to be a lack of control or disciplinary mechanisms in many countries to ensure that practice is kept up to national standards. For example, legislation in Paraguay calls for tertiary education entrance examinations, but there are none; in Senegal, some schools do not respect the intended instruction time, yet there is no consequence for their behaviour.

Finally, and perhaps the most difficult challenge to tackle, is **remodelling a country's data infrastructure** to make sure that data is available in a single hub.³ In other words, countries need to develop a notion of a complete and comprehensive education information system, and promote co-ordination and co-operation between the different actors who are inevitably involved when covering so many different areas of the sector.

This assignment has helped to identify that the data requested by the various tables of the system-level questionnaire for PISA rely on **a number of different information systems** for each country; some of these systems are even outside the control of the Ministry of Education. In addition, with the exception of Paraguay, the institution acting as the PISA-D NC is not responsible for the country's education management information system; in general the NC is only in charge of the educational assessment system. Therefore, and given the fact that there are other international data collections in place, it is extremely important to ensure that the PISA-D NC communicates and works jointly with the institutions responsible for reporting data to other international organisations, such as the UIS. It will be important to avoid a situation where these institutions within

countries are reporting the same data but for different international data collections, using alternative criteria for reporting.

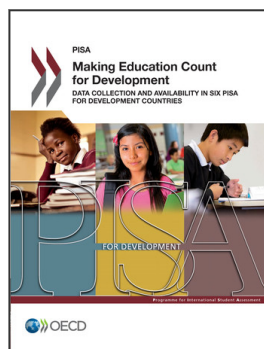
More generally speaking, it is worth considering **some modifications of the system-level questionnaire** to avoid soliciting data and metadata that are already available at the international level, for example through the regular UIS activities. It is particularly relevant in the case of data that is collected regularly, such as ISCED mapping, enrolment, and expenditure on education.

Notes

1. Author's calculations.
2. Further information is available at www.oecd.org/pisa/aboutpisa/pisafordevelopment.htm.
3. For further information on this topic see *A Road Map for a Country-led Data Revolution* (PARIS21, 2015).

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