

Chapter 4

Assessing the readiness of six participating countries to report key education data

This chapter is divided into two sections. The first section presents the assessment framework used to evaluate countries' capacities to participate in PISA for Development (PISA-D) by reporting against the project's system-level questionnaire – it looks at the results by questionnaire and reports i) the overall assessment of each country, ii) the quality and availability of information and data for each country, and iii) the challenges encountered. The second section presents a summary of the overall results by country, highlighting the strengths and weaknesses of each. The chapter shows that participating countries are generally in a good position to report the requested data. Quality data and metadata are generally available in all of the countries, or can be produced with some additional work. One challenge is that each country has a number of institutions responsible for the different dimensions covered by the questionnaire. However, in all cases, the institution responsible for PISA-D project management has shown a good level of communication with the relevant institutions and organisations.

This section and the next present the results of the assessment framework, evaluating countries’ capacities to participate in the Programme for International Student Assessment for Development (PISA-D) by reporting to its system-level questionnaire.

As an overall evaluation, participating countries are in a good position to report the requested data. The information systems and legislation frameworks within each country holding the data requested by the questionnaire can be evaluated in most cases as “advanced” or “emerging”. This means that quality data and metadata are generally available, or can be produced with some additional work.

The fact that each country has a number of institutions responsible for the different dimensions covered by the questionnaire is an additional challenge. However, in all cases, the institution acting as the National Centre (NC) has shown a good level of communication with the relevant institutions and organisations.

Across this section the results are presented first by “table” in the questionnaire, and in the following section by country. This layout aims to highlight the strengths and weaknesses by theme and by country. The country-level assessments are also presented in a summary format. A full version of each country analysis, including the assessment tables, can be found in Chapters 6-10.

Table 4.1 summarises countries’ capacities for reporting on each table of the system-level questionnaire, as a general overview.

Table 4.1 Countries’ capacities to respond to the system-level questionnaire

Table in questionnaire	Latin America			Sub-Saharan Africa		Asia
	Ecuador	Guatemala	Paraguay	Senegal	Zambia	Cambodia
1 Education stratification	Dark blue	Light blue	Dark blue	Dark blue	Dark blue	Dark blue
2-1 Assessments and examinations	Dark blue	Dark blue	Dark blue	Dark blue	Dark blue	Dark blue
2-2 Tertiary entrance examinations	Dark blue	Dark blue	Grey	Light blue	n/a	n/a
3 Number of class sessions per year	Dark blue	Light blue	Dark blue	Dark blue	Dark blue	Dark blue
4 Annual teacher salaries	Dark blue	Dark blue	Dark blue	Light blue	Dark blue	Dark blue
5 Requirements for pre-service teacher training	Dark blue	Dark blue	Dark blue	Light blue	Dark blue	Dark blue
6 National accounts	Dark blue	Dark blue	Dark blue	Dark blue	Dark blue	Light blue
7-1 Education expenditure	Light blue	Dark blue	Dark blue	Dark blue	Dark blue	Dark blue
7-2 Number of students	Dark blue	Dark blue	Dark blue	Light blue	Dark blue	Dark blue

Note: Dark blue: advanced grade; light blue: emerging grade; grey: latent grade; white: partially or not evaluated; n/a: not applicable. As explained in Chapter 3 (methodology and tools), the data collection system for this report was based on interviews with the NPM and other officials responsible for managing the areas covered by the questionnaire. The detail for each country can be consulted in Part II of this report.

Assessments by questionnaire theme

Questionnaire table 1: Education stratification

Overall assessment

All countries can provide information on the structure of their education system, as well as the theoretical entrance ages and duration of each ISCED level. Because this information is mapped to international standards, it facilitates comparisons between countries.

Quality and availability of information and data

Most of the information available in countries is reliable and available to all, from the government officer to international organisations such as the UNESCO Institute of Statistics (UIS). Generally, legislative information is accurate and recent in all countries, and has been assessed as providing a clear framework for action.

In Guatemala's particular case, the current Education Act dates from 1991 and the government has since produced other, supplementary pieces of legislation. The existence of these different regulations could allow different interpretations of some aspects of the education system. For example, the starting age for primary education and the duration of pre-primary level cycles were discussed during the visit, and it emerged that Guatemala's definition of the ISCED 2011 equivalence for pre-primary education is still pending.

Challenges

Education systems evolve over time, and therefore this assessment of countries' capacities is likely to change. For example, Senegal is in the process of completely reviewing its educational system in order to provide more technical and vocational opportunities to its students. It might, in this process, have to review the stratification information.

Questionnaire table 2-1: Assessments and examinations at lower and upper secondary level

Overall assessment

Among the group of countries studied, there is no apparent common denominator in carrying out national assessments and examinations.

Cambodia, the only Asian country in the study, does carry out national assessments in lower secondary, in general programmes only. National exams are carried at both lower and upper secondary levels, again only in general programmes.

Two of the Latin American countries, Guatemala and Paraguay, do not have national examinations at the secondary level. Instead they carry out national assessments at lower secondary (in general programmes only, in the case of Guatemala) and upper secondary (all orientations in both countries). In Guatemala, the upper secondary assessment takes place annually, and the lower secondary assessment takes place every three years – both assessments are censuses. Ecuador conducts both national assessments at lower and upper

secondary levels, as well as national examinations at the upper secondary level only (for both general and technical/vocational orientations).

In sub-Saharan African, Senegal has no national assessment in secondary education – after a failed attempt in 2001-03, they decided to focus on their primary national assessment – but it does have national exams in all orientations of both lower and upper secondary education. These national exams function as a tertiary entrance exam, with the results used to filter students for the tertiary level.

In Zambia, national assessments are carried out at Grade 9 (the end of lower secondary education), and national examinations in the general streams of lower and upper secondary, at Grade 12 (the last grade of upper secondary). In 2015, there are plans to reintroduce national exams for technical programmes.

Despite these differences in the quantity and kind of test implemented, all countries have solid institutions in charge of the assessments and examinations at the secondary education level; most of them act as the PISA-D NC, and they are able to provide sufficient data for the system-level questionnaire.

Quality and availability of information and data

In general, the units in charge of managing the national assessments and examinations are working to clear institutional guidelines and well-defined frameworks. In terms of availability, most countries do have a specific web portal where an outside user can access results, reports, and secondary analysis. In fact, only one institution, Paraguay's *Sistema Nacional de Evaluación del Proceso Educativo* (National Assessment System of Educational Progress) (SNEPE) did not seem to have its own webpage working at the time of the visit; and one other, the Bac Office in Senegal, has its own website but it had some navigation difficulties and a two-year lag in publishing the results.

Challenges

Disseminating data – in this case, assessment and exam results – can be as important as collecting it. There seems to be an uneven approach across the participating countries. Some have a transparent and open approach in sharing results with as many people as possible, while others seem to prefer keeping the results to themselves.

A second challenge for some of the participating countries is to improve the timeliness of results dissemination. The differences observed between countries shows that there is room for improvement. While some countries are able to publish results within a month of the test date, others disseminate data more than a year later.

Questionnaire table 2-2: Tertiary entrance examinations

Overall assessment

There is not a high prevalence of tertiary entrance examinations in the PISA-D participating countries.

The only country with a universal entrance examination is Ecuador, where all students sit the exams to enrol in tertiary education. In Guatemala, only the students wishing to register at the public university (representing about 40% of total enrolment at that level) sit the exams.

In Cambodia, there is no tertiary entrance examination. The Grade 12 examination at the end of upper secondary is also used as an entry to higher education, but individual universities have an additional entrance exam to select students.

In Paraguay, there is no entry examination scheme, although legislation in Paraguay stipulates that there should be.

In Zambia, a competitive selection process to access tertiary institutions including universities follows national secondary school exit examinations administered by the national Examinations Council of Zambia (ECZ).

Senegal also has none; the end-of-upper secondary exam (*Baccalauréat*) is used as a benchmark for student entry to tertiary education, although the exams are not specifically designed for this purpose. However some criteria exist for each faculty which are used for entry selection and for scholarships. For example, in the faculties of medicine, the student must have 18 years and good marks in sciences, maths and physical chemistry. Some *grandes écoles* organise examinations.

Quality and availability of information and data

In those countries producing information, it is of good quality and available to some extent. Although government officials are aware of the information produced, and that it is disseminated to a variety of actors, it seems that some efforts are still needed in making public access easier and more dynamic. For example, in Ecuador, some aggregated data and summary reports are shared with external users, but more disaggregated data or detailed reports are not available. Ecuador has confirmed that it plans to make all the data available in the future.

Currently, there are no formal international data collections on tertiary entrance examinations; in many countries entrance requirements are specific to the institution or programme, rather than nationally standardised. As such, it might be difficult to collect information to use and compare in the international context. As noted in Chapter 6, Ecuador has a national standardised entrance examination for public universities called *Examen Nacional para la Educación Superior* (National Examination for Higher Education) (ENES).

Challenges

For tertiary entrance examinations the challenge seems to be a methodological one. How should exams be classified that are used for entry into tertiary education when they are designed, managed and carried out by secondary education boards and national examination councils (e.g. in Zambia)? And what about when the law stipulates that there should be tertiary entrance exams, but in practice none are implemented?

Questionnaire table 3: Instruction time in public institutions*Overall assessment*

Information on intended instruction time in public institutions by grade (and therefore, by theoretical entrance age of the students) is comprehensively available at the international level, demonstrating the availability and quality of national frameworks, policies and implementation guidelines.

Because the information collected is normative (i.e. related to a standard definition of instruction time and grade), there might be discrepancies between the intention and the practical implementation.

Quality and availability of information and data

All the countries have legislation and frameworks in place and the teams managing the curriculum receive clear guidelines and are empowered to do their work. Most of the curricula are also recent in the participating countries.

Because the curriculum is such a specific part of the education system, the teams responsible for developing it in the participating countries tend to be strong and effective. However, implementing the curriculum is more of a challenge in some of the countries.

In Guatemala, as described above, different pieces of legislation regulate some aspects of the education system. This seems to affect how instruction time is defined in pre-primary and primary education. During the UIS's visit it was not possible to obtain a clear definition of the duration of one class session in these educational levels.

Challenges

Since pre-primary programmes are an area of growing interest, with well-known benefits for learning outcomes, many countries are revising these programmes as well as policies that specifically address pre-primary education. Special attention should be given to potential changes to that area, namely in intended instruction time.

Questionnaire table 4: Annual statutory teacher salaries*Overall assessment*

In general, data on statutory teacher salaries are well-defined in the participating countries, as well as the criteria for promotion. Under some human resources policies teachers are treated as civil servants and in others there are specific regulations for teachers. In any case, the legislation tends to be clear and well-known by all the actors.

However, since many criteria come into play in determining teachers' salaries, this information should be interpreted with caution. In some countries, salary increments are based on years of experience (Guatemala). In Senegal, increments are based on years of experience and on competition. In some countries, a teacher can go from the bottom to the top of the salary scale in 19 years; in others it can take some teachers 30 years (Ecuador).

All countries pay teachers' salaries on time, and teachers are represented by unions, which are pushing for government accountability and transparency in salary-setting.

Quality and availability of information and data

Although the different scales and criteria used to determine a teacher's position on the salary scale are usually clear and available to all types of users (from the national civil servant to the outside user and international organisations), there is still some validation to be done at the point of official data collection. In the past, UIS collected this information through World Education Indicators (WEI), and a typical issue noted by UIS was the mismatch between the prescribed duration from the bottom to the top of the scale, and the actual time it took teachers to reach the highest salaries.

Senegal is a good example. Various institutions are involved in the teachers' pay procedure, and it seems that there are some problems of co-ordination and communication. Also, there is a family allocation that can be added to the standard salary making data collection more complicated.

Challenges

In many countries, there are multiple sources of information for teacher salaries, although an official scale (including all the components requested in the system-level questionnaire) is publicly available through legislation or union publications. Because there are many types of teaching contracts and many different actors involved in setting the salaries, alternative measures could be used to complement the use of salary data, such as the average salary per teacher according to type of contract.

On the other hand, the lack of international data collection on teachers' salaries for these countries is an issue to be considered. With the exception of Paraguay, which has been part of the WEI data collection initiative for more than a decade, countries participating in PISA-D have not regularly reported data on teacher salaries to international organisations. Therefore this dimension needs special attention at the time of the PISA data collection to ensure that reported data are internationally comparable.

Questionnaire table 5: Requirements for teacher training and professional development

Overall assessment

Most of the data requested in table 5 is qualitative and based on normative information which is often linked to standards and legislation. Teacher training and professional development tend to be well regulated in the participating countries and the countries are therefore in a good position to report data on these activities.

However, teacher training is another area undergoing change in terms of standards and policies. At least two countries (Ecuador and Guatemala) have recently undergone a review process of training requirements for entering the teaching profession, and this affects the available data. Senegal, for instance, has completed an upgrade of the training required for primary teachers, and is now revising training for secondary teachers.

Quality and availability of information and data

The information on requirements for pre-service teacher training, entry into the teaching profession and teachers' professional development is quite robust and easily available. Although many units are involved in setting or implementing the standards, the information is of good quality and readily available.

Challenges

The main challenge in this area concerns the various reforms of the minimum training needed in order to teach at different levels in the participating countries. This information is expected to need revision (or at least validation) when the official data collection takes place for PISA 2015.

Questionnaire table 6: National accounts

Overall assessment

The national accounts worksheet in the system-level questionnaire focuses on GDP, PPP conversion factors, and population estimates. Data on GDP and population are key indicators for the national statistics system, and they are usually produced at the national level by the central statistical offices or, in the case of GDP, by the central bank.

In the PISA-D participating countries, PPP factors are not computed at the national level. The countries indicated that the main source of these PPP factors for GDP is the World Bank estimates.

Quality and availability of information and data

The countries' data on GDP are extremely timely and of good quality. The teams responsible for producing these estimates work towards specific objectives within clear frameworks. All countries follow international guidelines and frameworks for building national accounts with the exception, in some cases, of updating the base year at appropriate intervals.

Population estimates are available, in most cases, but their accuracy depends on the frequency of national censuses, which in some cases are quite old. For example, Ecuador and Zambia carried out a census in 2010 and its population estimates are now quite close to those used by the international community (produced by the UN Population Division); but the official results of the 2012 Senegalese census are not yet finalised. Similarly, in Paraguay, a population estimate revision using data from the 2012 population census had not been published at the time of the country visit. Guatemala has not implemented a population census in the 2010 round, so their population estimates are based on the population census of 2002.

Challenges

The freshness of GDP and population data is key in using these background data for secondary analysis. Over the next few months, national statistical offices and central banks might update their estimates, in which case countries should carry out a thorough revision (or validation) of these indicators.

*Questionnaire table 7-1: Education expenditure**Overall assessment*

Countries taking part in PISA-D are able to produce data on education expenditure for the public sector. As a general rule, data on public expenditure is estimated from the national executed budget (actual figures). The ministry of education accesses the data on expenditure for the educational budget it manages, while the budget allocated to educational programmes outside the ministry of education (including national universities) is accessed through the ministry of finance. Nonetheless, countries face difficulties when having to report data on private education expenditure. Although some of them have experience of creating estimates for private expenditure, none of them has recent data for this source.

Quality and availability of information and data

Ecuador, Guatemala, and Paraguay have reliable finance data on public expenditure as UIS has been working with them for many years in order to ensure coverage and quality.

Cambodia is currently able to provide public data on expenditure only up to the financial year 2010, although some issues are being worked out with the country that should enable it to provide more up-to-date public data in the future. Senegal is currently participating in an UIS project aimed at improving the compilation and reporting of education finance data by using national education accounts, and should therefore be able to produce all the necessary data.

Among PISA-D countries, Paraguay is the only country that has reported private expenditure to the international community, for reference year 2010.

Zambia, in turn, has participated in the UIS “Questionnaire B” (on finance). However, some resulting indicators – such as the educational expenditures expressed as a percentage of GDP – show values that UIS considers unpublishable because they are incomplete and inaccurate. This also indicates difficulties at the national level in gathering the relevant data.

Challenges

The main challenge in the area of education finance is including private expenditure. UIS has been working recently with Senegal, Paraguay, Guatemala and Ecuador to improve international statistics reporting on education finance. It is important to continue this work in order for the countries to produce estimates for private expenditure.

Another difficult issue for participating countries is categorising public expenditure on private educational institutions as either “government-dependent” or “independent”. It seems that countries are able to identify the private educational institutions that receive resources from the government, but it is hard to calculate the proportion of the resources within the institution budget that fall into either category.

Questionnaire table 7-2: Number of students

Overall assessment

All countries can report enrolment in public institutions, at least for primary and secondary level. For private enrolment, as above, most countries are not able to distinguish enrolment between the categories of government-dependant private institutions and independent private institutions.

Also, Cambodia seems unable to estimate the number of students participating in technical or vocational education at upper secondary level.

Quality and availability of information and data

Where available, data are of good quality. Such data have been reported for many decades, and because of the working relationship between UIS and the participating countries, we can assess that the data presented in the country-specific system-level questionnaires reflect the current situation of the education system.

Challenges

Data points that are shown as unavailable in this assignment are indeed hardly available. UIS is committed to working with individual countries to make sure that enrolment is included in the international database, so it can be used in the PISA-D initiative.

Cambodia

There was no site visit scheduled to Cambodia in the current assessment project framework. Instead, we carried out desk-based research in order to investigate Cambodia's capacities to fill in the system-level questionnaire, as well as to provide some insights on the quality and availability of data. Cambodia's assessment should therefore be considered partial. A fuller version of this country analysis, including the assessment tables, can be found in Chapter 5.

The institution in charge of implementing PISA-D is the Quality Assurance Department of the Ministry of Education, Youth and Sports.

Since most of the tables included in the system-level questionnaire relate to UIS surveys in which Cambodia participates, it is possible to make an overall assessment of data availability and quality. Cambodia has successfully provided data to UIS on education stratification (table 1; through the ISCED mapping), assessment and examination at lower and upper secondary level (table 2-2; through observing learning outcomes), instruction time in public institutions (table 3; through the global module on intended instruction time) and number of students (table 7-2; through the education survey).

Challenges

Regarding statistics in the education expenditure table (7-1), these are regularly reported to UIS through its education survey, but coverage is limited since they do not include private expenditure. This area for improvement needs attention.

With respect to data on teachers for tables 4 and 5, UIS only includes some general data about educational programmes for teacher training. The current UIS education survey for 2015 includes a supplementary questionnaire on teachers, requesting data on salaries and other dimensions, but the results will only be available later this year (2016).

Data requested for the national accounts table (6) are managed by the National Institute for Statistics of Cambodia. The data's general availability and quality can be assessed as "emerging", based on data found on its official web page and international databases such as those run by the IMF, World Bank and the UNPD.

Data requested on tertiary entrance examinations (table 3) is not applicable in Cambodia.

The EMIS office is currently working with other Ministry of Education, Youth and Sports departments to develop a unified database. This will include data from EMIS, personnel and the finance department. As a result it will be much easier for Cambodia to extract and submit data. Until then, there seems to be a need for improved communication and/or collaboration.

Ecuador

Ecuador is in a very good position to respond to the system-level questionnaire. Each data table or worksheet in the questionnaire has an institution assigned to it to collect and/or manage the requested information. Metadata are consistently based on well-known legislation (national law or administrative norms) while data are regularly based on advanced information systems. A full version of this country analysis, including the assessment tables, can be found in Chapter 6.

Ecuador's *Instituto Nacional de Evaluación Educativa* (National Institute for Education Assessment) (INEVAL), the PISA-D NC, is an independent public institution with a good reputation in the country and a high level of professionalism. It directly manages, or is closely involved in, some of the information systems used for data requested by the system-level questionnaire, such as the assessments and examination table (2-1) and the tertiary entrance examinations table (2-2). Data to complete the rest of the worksheets or tables rely on other organisations but the INEVAL has a good level of institutional communication with them.

Most of the data requested by the system-level questionnaire are managed by the Ministry of Education (MoE), where various offices produce data for tables 1, 3, 4, 5, 7-1 and 7-2. The main information system in place is managed by the Co-ordination of Planning Office, and includes data on education stratification, expenditure and enrolment. They produce this information regularly and report it to UIS within their international education statistics surveys framework. Data on curriculum, teacher salaries and training are managed by other offices within the MoE and are well documented by national legislation.

Data requested by the national accounts table (6), GDP estimates and population projections are key elements of the national statistics system and they are managed well by the Central Bank and the National Institute for Statistics respectively. They produce and publish this data regularly following international guidelines and recommendations.

Challenges

Ecuador's most important identified weakness is the statistics coverage of educational expenditure. Although these data are regularly reported to UIS, the coverage is limited since they do not include private expenditure. This area for improvement needs attention.

Another key issue for Ecuador is that data on enrolment need to be aligned with the fiscal year; not only because the school year and the fiscal year are not aligned, but also because the country has two different school cycles. INEVAL and the MoE's Co-ordination of Planning office have worked on this issue in order to provide the correct data to the system-level questionnaire. It is important to require the country to produce the documentation of the technical criteria applied.

Guatemala

Guatemala is in a good position to respond to the system-level questionnaire. Each data table in the questionnaire has an institution assigned to it to collect the requested information. Metadata are all based on well-known legislation (national law or administrative norms) while the data are regularly based on advanced information systems. A full version of this country analysis, including the assessment tables, can be found in Chapter 7.

The *Dirección General de Evaluación e Investigación Educativa* (General Directorate of Assessment and Education Research) (DIGEDUCA), the PISA-D NC, is a public institution belonging to the MoE. It was created with the aim of managing the national education assessment system and has shown a remarkable level of stability across the years, even in the context of institutional changes at the MoE. Due to its functions and responsibilities, DIGEDUCA manages the information systems for the data requested by the assessments and examination table (2-1) on the system-level questionnaire.

Other offices within the MoE are responsible for data requested by tables 1, 3, 4, 5, 7-1 and 7-2. However, since DIGEDUCA is part of the Ministry, communication between offices is fluent and there are formal information request procedures in place.

The main information system is managed by the Directorate of Planning, and includes data on education stratification, expenditure and enrolment. They produce this information regularly and report it to UIS within their international education statistics surveys frameworks. Data on the curriculum, teacher salaries and training are managed by other offices within the MoE.

As well as the MoE, data for tertiary entrance examination table (2-2) are managed by the San Carlos University of Guatemala. This is the only public university in the country and it accounts for approximately 40% of enrolment in tertiary education. It has a well-established entry system which includes a compulsory standardised entrance

examination. However, this system only applies to students enrolled at San Carlos, rather than the country's tertiary institutions in general.

Data requested by the national accounts table (6), GDP estimates and population projections are key elements of the national statistics system and they are managed well by the Central Bank and the National Institute for Statistics respectively. They produce and publish this data regularly following international guidelines and recommendations. However, it should be noted that Guatemala did not take part in the 2010 round of population censuses, which could affect the accuracy of the current population estimates and projections.

Challenges

One identified weakness is the data on instruction time. Although there are offices in charge of regulating this topic within the education system, the related legislation is not specific enough on the duration of sessions for the different educational levels. An agreement is needed between the involved offices within the MoE to meet the requirements of the PISA-D questionnaire.

A second issue is the duration of pre-primary education according to ISCED levels of education. Guatemala's reporting on the ISCED 2011 mapping to UIS is still pending and, given the new international education levels framework, there are some inconsistencies in the starting age and duration of the pre-primary level between the criteria applied to the previous mapping (based on ISCED 1997) and the national legislation. The necessary new criteria have been provided by the national team in December 2015 and are being followed up with UIS.

A third issue is the data on educational expenditure; these are regularly reported to UIS through its education survey, but coverage is limited since they do not include private expenditure.

Paraguay

Paraguay is in very good condition to respond to the system-level questionnaire. Each data table in the questionnaire has an institution assigned to it to collect and/or manage the requested information. In general, metadata are based on well-known legislation (national law or administrative norms) while statistical data are based on advanced information systems. A full version of this country analysis, including the assessment tables, can be found in Chapter 8.

The General Directorate of Educational Planning, the PISA-D NC, sits within the MoE and is the institution responsible for Paraguay's EMIS. That is an extra asset in terms of data reporting. Paraguay also participated in the World Education Indicators (WEI) project run by the UIS and the OECD from 1999 to 2013. Given that the PISA system-level questionnaire and the WEI survey share many dimensions and tables, Paraguay has valuable experience of reporting these common dimensions to international organisations.

The General Directorate of Educational Planning is also responsible for the SNEPE, the education sector's national assessment system. Due to its responsibilities, this institution manages the information systems for the data requested by worksheets or

tables 1, 2-1, 7-1 and 7-2 of the system-level questionnaire. Other offices within the MoE are responsible for data requested by tables 2-2, 3, 4 and 5. The communication between offices is fluent and there are formal information request procedures in place.

Data requested by the national accounts table (6), GDP estimates and population projections are well managed by the Central Bank and the General Directorate of Statistics, Surveys and Censuses respectively. They produce and publish these data regularly following international guidelines and recommendations. However, it should be noted that Paraguay does not have a legally regulated national statistics system, which could affect the co-ordination between statistical operations and the development of some information systems. For example, due to the lack of key basic economic statistics, the Central Bank does not implement the complete national accounts framework.

Challenges

One identified weakness is data on educational expenditure: these are regularly reported to UIS through its education survey, but their coverage is currently limited since they do not include private expenditure. There are household surveys available in Paraguay to produce these estimates and the country needs to develop this area.

A second topic is the lack of a centralised or unified entrance system to tertiary education. Although the Education Act calls for a centralised system, instead each educational institution manages its own entrance process. The criteria and related tools are therefore particular to each case. The only exception is the entry system to teacher training programmes.

A third issue currently affecting the education indicators based on population data is that there are inconsistencies between the data on enrolment from the MoE and the population data from the General Directorate for Statistics, Surveys and Censuses. The current enrolment rates for the different educational levels, particularly in pre-primary and primary education, are low; and these school participation values are not confirmed using other methods such as estimates from household surveys. Paraguay needs to follow up this issue.

Senegal

Senegal is in a satisfactory condition to respond to the system-level questionnaire. The country has institutions responsible for producing and managing the information requested by the different tables of the questionnaire, and the metadata are in general based on well-known legislation (national law or administrative norms). A full version of this country analysis, including the assessment tables, can be found in Chapter 9.

The institution in charge of implementing PISA-D in Senegal is the *Institut National d'Etude et d'Action pour le Développement de l'Éducation* (National Study and Action Institute for Education Development) (INEADE) within the *Ministère de l'Éducation Nationale* (Ministry of National Education) (MEN). It is directly responsible for the data requested by table 3 (number of class sessions per year) and is closely involved in defining the data requested by table 1 (education stratification).

The structure of Senegal's education sector, and consequently its information systems, means that different ministries are responsible for different levels of education

or particular orientations. MEN is responsible for general education from ISCED Level 1 (primary) to ISCED 3 (secondary); the *Ministère de la Formation professionnelle, de l'Apprentissage et de l'Artisanat* (Ministry of Vocational Training, Apprenticeship and Crafts) (MFPAA) manages technical and vocational education; the Ministry of Higher Education and Research manages tertiary education; while the Ministry for Women, Families and Children manages pre-primary education.

Apart from these four ministries, data requested by the national accounts table (6), GDP estimates and population projections are managed by the National Agency for Statistics and Demography. It produces and publishes these data regularly following international guidelines and recommendations. Finally, data on annual teacher salaries (table 4) and education expenditure (table 7-1) are produced by the Ministry of Finance.

Challenges

Given this structure, it is clearly a challenge to co-ordinate all the relevant institutions. One general point is that while the individual parts of the educational information system are working well, it would benefit the education system as a whole to make an effort to co-ordinate the parts; and to use the information for policy making.

Regarding the identified weaknesses, one issue is time sensitivity, and the availability of data on assessments and examinations at secondary level (the country does not have entrance examinations at tertiary level). Although assessments are in place with good coverage and a clear framework for action and responsibilities, there are some delays in publishing the results, and there seem to be problems accessing and using the data for both internal and external users.

There is a similar situation for data on instruction time in public institutions. Teaching time is clearly defined by the normative standards; some of it very recent, such as the 2014 legislation for pre-primary and lower secondary education. However, government officials and outside users alike have limited access to these data, and there are no clear mechanisms in place to ensure that the prescribed instruction time takes place in schools.

With regard to data on teacher salaries, the overall quality seems reliable – salaries are calculated with very specific grids and standardised budget posts, and data are produced and disseminated monthly. Although the units involved are separate and rarely communicate with each other, they have a clear mandate and framework for action, and clearly own the information and data.

Although information is available at national level, it is to mention the lack of up-to-date data on education expenditure submitted to UIS. This is an area for improvement that is currently supported by the UIS, in collaboration with the UNESCO International Institute for Education Planning; the results of this work should become available over the next few months.

Improved internal co-ordination between education data producers is required on the part of all the different actors involved in education, to consistently report statistics on education finance at both national and international levels, and to improve the coverage of currently available data. The MEN and MFPAA should find ways to publish their data jointly on the general education sector with the technical and vocational education and

training sector, as they have the same target population, and because there are many bridging programmes between these sectors. Guided by the difficulties the country is facing in producing data for HDI calculation, a co-ordination mechanism has been recently established between the Ministries involved. This will most probably give the lead to MEN in publishing data for all education sectors.

Zambia

Zambia has acceptable capacities to produce the statistics requested through the system-level questionnaire that are either at an advanced or emerging stage. The country has established mechanisms for conducting high-stakes national examinations and national assessments, as well as implementing international student learning assessments. Legislative instruments are in place to guide the education system's implementation, to regulate its human resources, and to authorise the activities of various data-producing entities. A full version of this country analysis, including the assessment tables, can be found in Chapter 10.

The institution in charge of implementing PISA-D is the Examinations Council of Zambia (ECZ) of the Ministry of Education, Science, Vocational Training and Early Education. This institution is also responsible for the information system that produces the data requested by the assessments and examinations table (2-1) of the system-level questionnaire. With the exception of national accounts and tertiary entrance examinations tables (the latter is not applicable in Zambia), all the data requested by the questionnaire are managed by different institutions within the Ministry of Education, Science, Vocational Training and Early Education.

Data requested by the national accounts table (6), GDP estimates and population projections are managed by the Central Statistical Office (CSO) under the Ministry of Finance. The CSO generates estimates on GDP, population projections and other social and economic data regularly following international guidelines and recommendations.

Challenges

One important identified weakness concerns the production of statistics on education expenditure, which are prepared by the Accounts Unit within the Ministry of Education, Science, Vocational Training and Early Education. The system used to produce these statistics does sufficiently not track expenditure in private institutions, and in fact only reports on education expenditure by institutions directly managed by the Ministry of Education, Science, Vocational Training and Early Education. Some private institutions receive funding from private entities at the local level but this information is not captured.

Improved internal co-ordination between education data producers will be required on the part of the Ministry of Education, Science, Vocational Training and Early Education to consistently report statistics on education finance at the international level, and to improve the coverage of centralised statistics on education expenditure.

Other government entities such as the Directorate of Standards and Curriculum maintain separate records on education expenditure, but these are not reflected either in the data collection. Better co-ordination is needed by the Ministry of Education, Science, Vocational Training and Early Education between private institutions, other directorates

and ministries that manage private institutions to improve the quality and coverage of centralised statistics on education expenditure, as well as statistics reported at the international level.

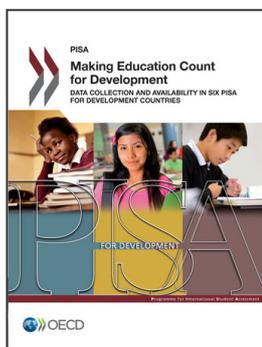
A second challenge is the coverage of education statistics in pre-primary education. The Directorate of Information and Planning within the Ministry of Education, Science, Vocational Training and Early Education conducts an annual school census covering all formally recognised education programmes. Coverage is acceptable, with over 90% of public and private institutions completing the annual census. However, pre-primary data are still not collected since most of the schools for this level of education are private. The Ministry of Education, Science, Vocational Training and Early Education is working to correct this following the shift of this portfolio to it from a different ministry.

Another notable topic is that nationally produced education indicators regularly published by the Directorate of Planning and Information, based on primary school-age population, depict a number of school-aged children at the national and sub-national levels that exceeds the target population in those areas. Given that these annual indicators are produced using the recent 2010 census and resulting projections, data producers should consider reviewing the quality of both sources of data to resolve the concerns around indicators that rely on age-specific data.

The Ministry of Education, Science, Vocational Training and Early Education should also consider the more timely publication of examination and assessment results on online government platforms, and timely dissemination of annual education statistics bulletins in the public domain.

Highlights on student's performance (national Grade 12 only) at the sub-national level, and by sex are published on the ECZ and in the Ministry of Education, Science, Vocational Training and Early Education website. Students have the option to send short message services (SMS) texts to the ECZ to obtain examination results, or obtain results directly from the schools. However, detailed examination and assessment reports are accessible to the public in hard copy at the ECZ headquarters

As Zambia prepares for the consecutive phases of the PISA-D surveys, the NPM has suggested developing and carrying out contextual questionnaires, with support needed in particular to conduct Strand C of PISA-D (on out-of-school 15-year-olds), and in carrying out household surveys. Zambia has made internal commitments with resident development partners to secure funding to meet the expected costs of PISA-D.



From:

Making Education Count for Development

Data Collection and Availability in Six PISA for Development Countries

Access the complete publication at:

<https://doi.org/10.1787/9789264255449-en>

Please cite this chapter as:

UNESCO Institute for Statistics (2016), "Assessing the readiness of six participating countries to report key education data", in *Making Education Count for Development: Data Collection and Availability in Six PISA for Development Countries*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264255449-7-en>

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