



**PISA FOR DEVELOPMENT
CAPACITY NEEDS ANALYSIS:
PARAGUAY**



PISA
FOR DEVELOPMENT

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REPORT: PARAGUAY**

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This report has been prepared by Leonor Cariola Huerta on behalf of the OECD and the Ministry of Education and Culture of Paraguay as part of the PISA for Development project. PISA for Development is an initiative of the OECD and its partners that aims to identify how PISA can best support evidence-based policy making in emerging and developing economies – and contribute to the UN-led definition of global learning goals for the post-2015 agenda. In addition the project will help to build country capacity in assessment, analysis and use of results for monitoring and improvement among participating countries.

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PISA FOR DEVELOPMENT

CAPACITY NEEDS ANALYSIS: PARAGUAY

1. Introduction and background

PISA for Development (PISA-D) is an initiative of the OECD and its partners that aims to identify how PISA can best support evidence-based policy-making in emerging and developing economies – and contribute to the UN-led definition of global learning goals for the post-2015 agenda. In addition, the project will help to build country capacity in assessment, analysis and use of results for monitoring and improvement among participating countries.

The initial phase of the project in each participating country is the completion of a Capacity Needs Analysis (CNA). The benchmark for the CNA is the capacity required in the context of the PISA-D project, which is defined as:

- The ability of the individuals and institutions responsible for the project in each country to perform the necessary functions (as set out in the roles and responsibilities for the National Centre (NC) and the National Project Manager - NPM), solve the likely problems that will arise during implementation and set and achieve project objectives in a sustainable manner.

Countries may desire capacities for student assessment that go beyond this minimum requirement. Identification of additional needs should reflect the participating countries' aspiration, while respecting the feasibility of realising the additional needs within the context of PISA-D's implementation timeframe and required activities.

This document describes the implementation of the Capacity Needs Analysis (CNA) framework for PISA-D in the Paraguayan context. The framework is derived from the PISA project requirements, which are outlined in the PISA National Project Manager (NPM) Manual (OECD, 2012a), the NPM Roles and Responsibilities (OECD, 2012b) and the programme outputs in PISA-D (OECD, 2013). The CNA is designed to generate an understanding of capacities achieved and needed, which, in turn, will inform the formulation of a Capacity Building Plan (CBP) for the country. The framework for capacity needs assessment utilises elements of the SABER-Student Assessment questionnaires developed by the World Bank to assess the development of large-scale assessment systems (Clarke, 2012) as well as the PISA technical standards as the benchmarks for assessing Paraguay's assessment system and capacity for managing National and International Large-Scale Assessments. The standardised data obtained from applying the framework is incorporated into this CNA and will also be used to assist in identifying indicators, baselines and targets for improvement in the context of the CBP.

The framework is structured according to three dimensions: 1) Enabling environment, 2) Organisation and 3) Individual. The framework is designed to assess the capacity of the countries to achieve the five programme outputs of PISA-D, which are:

- enhanced contextual questionnaires and data collection instruments;
- enhanced descriptive power of cognitive assessment instruments in reading, mathematics and sciences, at appropriate skill levels within the PISA cognitive framework;

- an approach, including a methodology and analytical framework, for including out-of-school 15-year-olds in the assessments;
- increased country capacity in assessment, analysis and use of results for monitoring and improvement; and
- identifying learning opportunities among peers from other countries and other developing countries.

The tool used to enter data into the framework is available online at: www.polymetrika.org/PISAD/Home/DataEntryhttp://polymetrika.ca/PISAforDev.

The information and analysis presented in this report is based on a reading of appropriate documents together with extensive interviews carried out with a range of stakeholders in Paraguay, in particular the Director and staff of the Directorate for Evaluation of Educational Quality (DECE) of the Ministry of Education and Culture. This Directorate is responsible for managing national and international assessments in the country and is the designated National Centre for PISA-D in Paraguay. In addition, other officials from the Ministry of Education and Culture and many users of the information produced by Paraguay's learning assessments were also interviewed between 2 and 12 March 2015.

In general, it can be said that Paraguay is well-positioned to implement PISA for Development. The country has taken part successfully in three cycles of the Latin American Laboratory for Assessment of the Quality of Education (LLECE), it has also participated in the Literacy Assessment and Monitoring Programme (LAMP) carried out by the UNESCO Institute of Statistics (UIS) as well as the International Civic and Citizenship Study (ICCS). Moreover, Paraguay has conducted seven national sample-based assessments and preparations are under way for a national learning census in October 2015. Paraguay has also conducted a study on pre-school children in their homes in order to assess their skills. All of these assessment activities have been led by DECE and the Directorate's small, well-trained and disciplined team are clearly competent managers of international, regional and national large-scale assessments and well-versed on the tasks involved in these operations. This experience and qualifications notwithstanding, DECE will need to address major challenges in implementing PISA and will need to strengthen the staff by securing more recruits, overcoming certain shortcomings in English language abilities and progressing with analysis methodologies in order to ensure wider use and dissemination of results.

The structure of the remainder of this report is as follows: Section 2 includes a description of the needs analysis methodology together with a presentation of the needs analysis framework; Section 3 summarises the needs analysis for Paraguay; Section 4 describes the capacity building priorities that arise from the analysis of needs; the detailed capacity needs analysis is presented in Annex A; and the terms of reference for the capacity needs analysis are included in Annex B.

2. Methodology

The development and application of the CNA framework in Paraguay followed three distinct phases. The first phase involved the analysis of primary documents in order to develop an initial set of criteria and preliminary data for the assessment framework together with a map of key stakeholders for interviews. The second phase involved the piloting of the initial framework in the Paraguayan context and the collection of data for the capacity needs assessment, mainly through interviews and documentary analysis. The final phase consisted of refinement and extension of the analysis framework and preparation of the draft report. At each stage the findings of the analysis were shared with the key stakeholders to ensure a shared understanding of the approach and the results of the needs analysis. Findings were adjusted in the light of feedback from the National Centre and the Ministry of Education and Culture in response to the initial analyses. The following sub-sections describe the structure of the capacity needs analysis framework and discuss each of these phases of its application in greater detail.

2.1. Structure of the Capacity Needs Analysis Framework

The capacity needs analysis framework consists of 112 capacity elements that are required for successful implementation and stakeholder use of the PISA for Development products. Each element is defined by an overall description together with descriptions of two to four levels of development (as applicable to each element).

The structure of the framework is hierarchical, with each PISA for Development capacity element nested within the three main dimensions:

- first, the enabling environment, encompassing the legislative context and culture that facilitates the implementation of the project, and the stakeholders who should make use of the results;
- second, organisation, encompassing the National Centre and any institutions that are involved in the implementation of the project; and
- third, individual, encompassing the staff of the National Centre and related organisations, in particular the National Project Manager(s) and her team.

Within each dimension, the elements are further organised according to the output for which the capacities are needed and in the order in which they are first needed. The PISA for Development requirements are reflections of the main PISA project milestones; they roughly follow a sequence beginning with the establishment of the National Centre and ending with the dissemination of results to stakeholders to support decision-making. They are defined as follows:

- designation of NPM and establishment of National Centre;
- compiling and confirming information on schools and students for the definition of the assessment population, stipulation of languages in which PISA will need to be implemented and definition of criteria for stratification of school and student samples;
- establishing security protocols for the National Centre and for national sub-contractors;
- co-ordination of enhancements/adaptations/translations of instruments, manuals and guides, and field trial and verification process with international contractors;

- deciding on the scale of national adaptations and number of assessment languages and co-ordination of enhancements/adaptations/translations of instruments, manuals and guides, and the field trial and verification process with translators, subject experts and international contractors;
- organisation of plans for local printing of assessment materials and verification of print and paper quality in all languages that will be covered, while maintaining security;
- communication and co-ordination with schools that will participate in the assessment;
- communication and co-ordination with international contractors for the selection of the student samples in conjunction with schools;
- recruitment and training of test administrators that do not have any direct relationship with the students that will be assessed and that are experienced and competent enough to carry out the testing sessions following the instructions, scripts, guidelines and procedures established;
- planning of the quality assurance process so that Quality Monitors visit a sample of schools to observe and document quality of implementation;
- planning of staffing and resources (human and material) needed for coding of test booklets and contextual questionnaires and data entry;
- establishing a training plan with key staff of the NC to attend training sessions;
- preparing and distributing testing materials to schools in a secure fashion, ensuring materials arrive safely and without suffering damage or alterations;
- suitable monitoring of school and student response rates in co-ordination with international and national contractors;
- a sample of the student testing booklets that were coded will be submitted to the international contractor for an International Coder Review (ICR);
- the NPM, in consultation with educational authorities, the international contractors, the OECD Secretariat and relevant development partners, reviews the database and the draft analysis plans for the national report;
- the NPM provides input and guidance with regards to the policy priorities that should help determine the content and analysis presented in the country report;
- NPM develops a dissemination plan of participation in PISA for Development and the relevant results from the project;
- production of reporting documents and involvement of the media;
- dissemination of results to general audiences; and
- dissemination of results to key specific stakeholders.

This structure facilitates the prioritisation of different capacity elements throughout the process of programme implementation. Each capacity element is also referenced to the PISA for Development programme output to which it is most closely related. In addition, each capacity element also refers to one or more of the primary documents listed below.

2.2. Using the framework

The purpose of the CNA framework is to facilitate the analysis of in-country capacity for implementation of PISA for Development. The framework provides a step-by-step approach to: 1) evaluating current capacity for implementing PISA for Development, 2) setting development goals related to PISA for Development activities, and 3) planning capacity building activities. However, the framework is not treated as static; rather, it is extended and refined based on information that emerges during the data collection process.

The rubrics were reviewed with stakeholders to identify the current status of each element. The information was collected using appropriate needs analysis methodologies, mainly questionnaire and interview. The completed rubrics also include a justification for each assigned rating. Once completed, the ratings and justifications, along with a narrative summary, were reviewed by key stakeholders. During the data collection and review process, if there were any new requirements identified, they were added to the framework. If a new element was added, it would be indexed by the structure defined and the textual descriptions of the levels followed the normative descriptions.

Preliminary target capacity levels were identified for each element and basic information for planning capacity building was compiled along with the targets. Responsibility for developing specific capacity elements was assigned to different resources, along with allocation of person-time, money and expected start/end dates. This information will be used to develop the capacity building plan and prioritise the different capacity building goals.

2.3. Primary document analysis

The development and implementation of the CNA framework is built on four primary documents:

1. PISA Technical Standards. This document details the quality standards required for successful participation in PISA. For the purposes of the CNA framework, these quality standards are also assumed to apply to the PISA for Development context.
2. PISA for Development project document. This document outlines the broad goals of PISA for development.
3. PISA National Project Manager (NPM) Manual. This document outlines the sequence of activities, roles and responsibilities and describes the recommended resources required for PISA implementation.
4. SABER – Student Assessment. The SABER framework describes the broader context of student assessment in a country. In particular, the CNA framework focussed particularly on large-scale national and international assessments.

These documents were used in association with other PISA sources to expand on the requirements for participation in the project, particularly in respect of the broader enabling environment. This dimension includes issues such as programme sustainability and the social, cultural and economic climates that will be necessary for meaningful use of the PISA results. The SABER framework uses evaluation rubrics that classify the status of the different elements of a country's assessment system as either Latent, Emerging, Established or Advanced. The different levels characterise the degree to which each element can support

an effective assessment system, with “Established” representing the minimum level required to sustain an assessment system.

The first stage of analysis examined each of the key documents from the dimensions of the enabling environment, organisation and individual to identify the required elements of each dimension that are necessary to produce the PISA for Development programme outputs. Each element in the framework describes a salient characteristic in the country’s capacity that, where necessary, may be addressed with a targeted capacity building response. It is important to note that the development of a single element of capacity sometimes requires several development activities.

For each of these preliminary programme elements, development levels were defined by following the approach established by the World Bank’s SABER instruments. Using a priori assumptions about the key features likely to be found at the four SABER levels, descriptions were defined for each level (as applicable) for each element. Completing the rubric involves interviewing stakeholders to collect information about each element and then, for each element, identifying the appropriate development level and developing a justification for the rating.

2.4. Normative definitions

To facilitate the creation of textual descriptions for the different levels of each element of the framework, normative definitions were developed for the three dimensions. As new elements were identified and included in the framework, these normative descriptions guided the textual descriptions for each level of the new element. For some elements, one or more of these levels did not apply; in these cases, the level remained undefined, as in the original SABER rubrics.

Table 1. Enabling environment ratings: Normative definitions used for each element

Latent	There is no environmental support or there are environmental obstacles that deter programme implementation.
Emerging	There are political, economic or social structures in place that may be adapted to facilitate implementation.
Established	Political, social or economic structures exist that can support implementation.
Advanced	Political, social or economic structures are currently providing support to similar activities.

Table 2. Organisational ratings: Normative definitions used for each element

Latent	There is no capacity to assume this role.
Emerging	Some capacity exists, but it is not institutionalised in a coherent administrative structure.
Established	Some capacity exists within a coherent administrative structure, but may lack availability or technical skills to assume responsibilities.
Advanced	Capacity is institutionalised and has sufficient resources to assume the responsibilities without developing additional capacity.

Table 3. Individual ratings: Normative definitions used for each element

Latent	Individuals do not have the skills required and/or are resistant to developing them.
Emerging	Individuals have foundational knowledge or personal attributes that will enable them to acquire required skills or attributes.
Established	Individuals have sufficient knowledge, interest and aptitude to allow development of required skills or attributes with brief workplace training and/or independent training and practice.
Advanced	Individuals already have the required skills or attributes.

2.5. Information collection activities

It is necessary to point out that the website of the Ministry of Education and Culture in Paraguay does not incorporate extensive information on assessment. There is no historical calendar of previous tests or future ones. There are also no reports on the results of the national tests aside from the TERCE reports (Treviño, 2014). On another less widely known Ministry website (which is also not easy to access) there is a list of the assessment projects funded and the next three applications with the respective dates.¹ Accordingly, the documentation was reviewed and discussed with those interviewed.

Based on the information prepared by the Director of DECE, a working plan was drawn up by the consultant for organising the interviews. DECE prepared an agenda for interviewing the officials in the Directorate as well as several other stakeholders from outside the institution, including individuals from the Ministry of Education and Culture, private organisations, international funding agencies, academic faculties and research centres. Moreover, interviews were also conducted by the consultant with students and teachers at four education establishments, which represented the most common settings, including multi-grade, rural and urban diversity and also institutions in vulnerable circumstances.

In accordance with the agenda, the consultant prepared meetings in order to prepare suitable questions to make it possible to complete the questionnaires and rate the rubrics of the website. At the start of interviewing, the consultant explained what the PISA test and PISA for Development project consisted of. This explanation was much more comprehensive for DECE staff who were also informed about the standards linked to the rubric criteria.

At the end of the interviews the findings were presented by the consultant to the main individuals at DECE in charge of data processing and analysis and measurement.

A meeting was held with the Minister for Education, who stated that the greatest challenge would be for the PISA results to be considered as evidence for the design of policies. The key policies implemented presently by Paraguay include early years education – by 2023 Pre-school Education is expected to be mandatory at the age of three – and institutionalisation of assessment, for which an independent body will be set up.

Upon completion of the meetings and when interviews were not taking place, the consultant went about completing information in the SABER-NLSA and SABER-ILSA questionnaires, as well as the ratings in the rubrics on the PISA-D website. The original drafts were reviewed by the DECE Director and subsequently by the Director General for Education Planning. Outstanding issues, particularly in relation to the budget, were consulted on by email as the draft report was finalised.

Table 4. DECE staff interviewed by the consultant

Name	Position	Other information
Rosana Marcore	Director	IT systems analyst. Has worked on education assessment since 1997. Master's degree in Project Assessment.
Rocío Larrosa	Head of analysis and measurement department	Degree in Mathematics
Denice Soto	Measurement technician	Specialist in Languages, Degree in Education Sciences and Degree in Guarani Language
Arnaldo Ortiz	Measurement technician	Degree in Guarani and Spanish languages
Sixta Soza	Measurement technician	Degree in Mathematics
Gloria Centurión	Measurement technician	Psychologist and Occupational Doctor of Philosophy
Oscar Gaona (assessment psychologist)	Research advisor	Master's degree in Education Quality Assessment (OEI, FLACSO and MEC)
Lida Soza	Measurement technician	Specialist in assessment and Degree in Education Sciences
Lourdes Rolón	Head of data processing	Degree in Systems Analysis
Esmilce González	Responsible for data processing and budgetary affairs and management	Degree in Mathematics and Statistics
Angelina Mendoza	Data processing	Statistics technician
Lidia Rivarola	Data processing	Economist

Table 5. Other stakeholders interviewed by the consultant

Name	Institution	Position
María Glora Pereira de Jaquet	Directorate-General for Educational Assessment, Guidance and the Syllabus, MEC	Director general
Gabriela Gómez	Multidisciplinary Organisation for Support for Teachers and Students (OMAPA)	Director
Sindy Sánchez	Teacher Training Department, MEC	Director
Peggy Martínez	Organisation of Ibero-American States (OEI)	Specialist in education.
Hilda González	Technical Office, MEC	Director of the technical office
Adrea Weis	Directorate-General for National and International Relations, MEC	Director general
Francisco Santa Cruz	Administrative council of the Fund for Educational Excellence	Director (medical area)
Carmen Romero		Executive director
Margarita Kelly		Director
Miguel Brunotte		Director (sales area)
Cristhian Schaerer		Scholar
Myriam Segovia Martínez	Dr Raúl Peña Institute for Higher Education	Academic co-ordinator
Rudi Elias	Institute for Development	Researcher
Myriam Mello	Vice-Ministry for Education Management, MEC	Vice-minster
César González	Indigenous School Education (DEEI), MEC	Director

Table 5. Other stakeholders interviewed by the consultant (continued)

Miriam Julia Gómez Jara	Postgraduate from Our Lady of the Assumption Catholic University (UCA)	Director
Marta Lafuente	Ministry of Education and Culture, MEC	Minister
Pabla López	Directorate-General for Technical Associations	Director general
José Molina	Ministry of Planning	Minister
M ^a del Carmen Giménez	Directorate-General for Pre-school Education (EI) and Basic School Education (EEB)	Director general
Gerda Palacios	Research and Innovation Centre, MEC	Director general, economist, master's degree in Education Politics and specialist in planning and development; specialist in research. 22 years at the MEC
Rodrigo Britz		Director of research, sociologist, master's degree in Policy Study and Ph.D.
Sara Lopez		Social work, master's degree, master's candidate and Ph.D. candidate
Ana Recalde		Clinical psychologist pursuing a master's degree in Assessment
	School	
Luis Bareiro	Directorate-General of the Fund for Education Excellence	Director, journalist
Menche (surname missing)		Director, journalist
Miguel Brunotte		Director, salesman (McDonald's)
Margarita Kelly		Director
Bachelor Nidia Teresa Delquis	Juan R. Delquis school	Spanish language lecturer (National University)
Luciana Meza		Chemistry lecturer (National University, did not study teaching, qualified)
Ana Ortiz		Degree in teaching specialising in language and Guarani teaching
Mirta Cardoso		Mathematics area (National University, degree in Mathematics)
Agueda Villamor		Professor of Natural Sciences (ISE and teacher for 7th to 3rd grade of middle cycle)
Hilda Oviedo		
Miguel Coluchi and 5 other students	Juan R. Delquis school	All 15 years old

3. Summary of capacity needs

As mentioned above, Paraguay has been implementing national assessments on an irregular basis since 1996, depending on the availability of external funding. Moreover, Paraguay has taken part in three regional studies carried out by the Latin American Laboratory for Education Quality Assessment (LLECE) together with the Literacy Assessment and Monitoring Programme (LAMP) of UIS and the International Civic and Citizenship Study (ICCS) of IEA.

The national centre for assessment is the DECE, attached to the Directorate-General for Education Planning, one of the nine Directorate Generals serving the Ministry and the Strategic Council.

Figure 1. Structure of the Ministry of Education and Culture of Paraguay

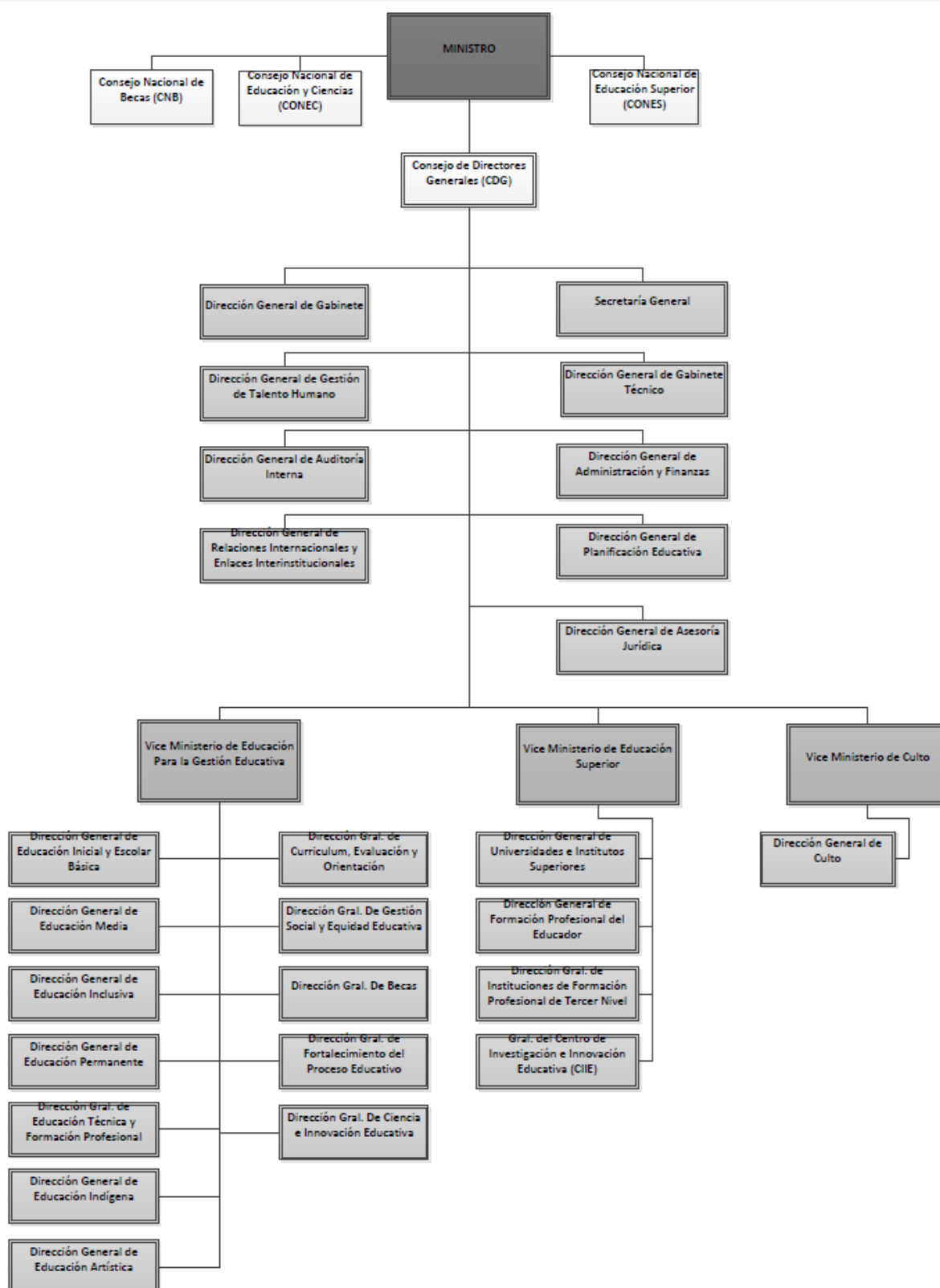
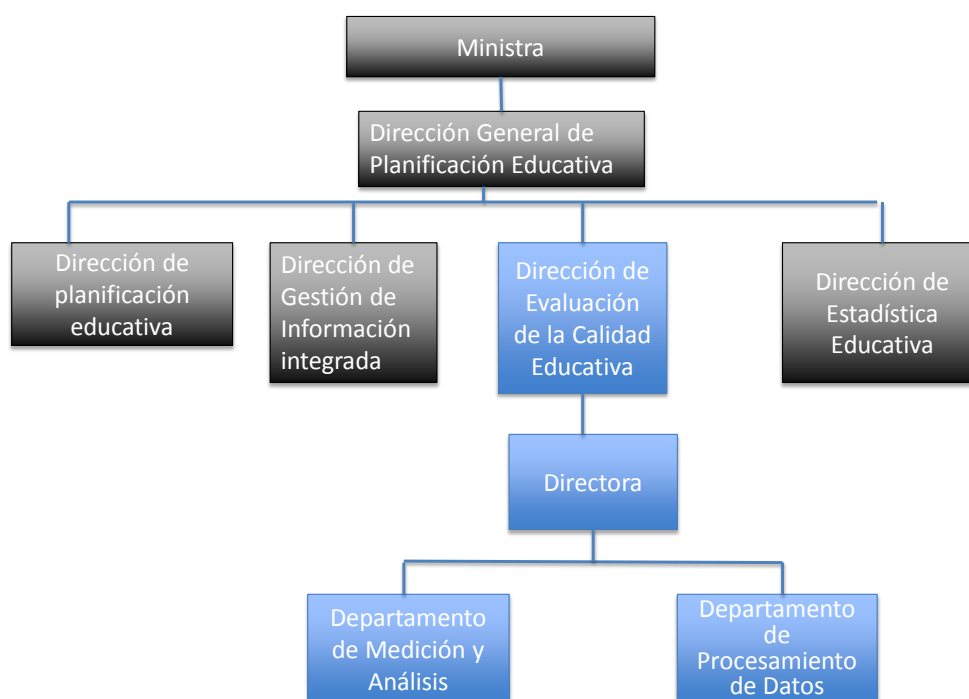


Figure 1 above shows that there are nine Directorate Generals attached to the Ministry and Strategic Council. One of these is the Directorate-General for Planning to which the DECE is attached.

It is vital to point out that one of the foremost projects in the pipeline for the Ministry is to set up an Assessment Institute that will operate as an independent body from the MEC. The hope is that more staff will be recruited for DECE and the Institute and that a suitable building will be provided according to the needs of the national centre once this institute is set up.

The current DECE team, albeit small, is well-trained, experienced in assessment and highly motivated. Moreover, within DECE there is ongoing training of staff in learning assessment. In particular, through the Organisation of Ibero-American States (OEI) along with an agreement with FLACSO, a master's degree course has been set up in Education Research and Assessment that is being attended by four individuals from DECE and other officials from the MEC. Moreover, for a number of years an advisor has been on hand to direct the psychometric analyses within DECE. There is still a degree of dependence on this advisor and a lack of confidence in DECE's ability to scale the data without assistance and subsequently analyse it. Indeed, few individuals in Paraguay are qualified to undertake such analyses and the person who has the broadest expertise in this field is a researcher who has worked for the DECE previously. Other technicians have been trained in these analyses, but due to various reasons have moved to other departments or have left the MEC altogether. The DECE organisational structure is shown below in Figure 2.

Figure 2. Organisational chart of the DECE



As shown in the table below, more than 60% of the elements considered in the framework for each dimension is either rated as established or advanced, indicating that Paraguay and DECE are well-positioned to successfully implement PISA- D. Organisational aspects followed by those linked to the enabling environment have the greatest number of elements classified as falling below the established level.

Table 6. Classification into element levels according to dimension

Dimension	Level	Number of elements	Percentage within the dimension	Percentage as a proportion of all elements
Enabling environment	Latent	1	2%	1%
	Emerging	8	21%	10%
	Established	22	46%	21%
	Advanced	14	31%	14%
Organisation	Latent	2	6%	2%
	Emerging	5	11%	4%
	Established	17	51%	17%
	Advanced	11	31%	10%
Individual	Latent	1	5%	1%
	Emerging	2	9%	2%
	Established	6	27%	6%
	Advanced	13	59%	12%

The details of the capacity needs assessment are summarised in the following sub-sections.

3.1. Capacity assessment for contextual questionnaires and data-collection

DECE has administered detailed and suitable contextual questionnaires as a key component of all the assessments it has conducted. These questionnaires are addressed to the following respondents: head teachers, teachers, students and representatives. In terms of construction and validity, all of the questionnaires used by DECE appear to be technically robust and relevant, but it would be pertinent to conduct a detailed analysis of the questionnaires.

DECE therefore has considerable experience in implementing and analysing contextual questionnaires. However, it would be highly important to build capacity within the DECE team for implementing and using the PISA questionnaires and also for further development of the needs and methodology to validate the existing contextual instruments used by Paraguay.

3.2. Capacity assessment for cognitive instruments and data collection

DECE prepares cognitive assessment tests for its national assessments based on the levels of achievement described on a skill-by-skill basis in the relevant national and programme documents. The document “National tests, academic achievement assessment in students completing secondary education, syllabus analysis in the area of language” (DECE, 2015) details the process that begins with preparation of the specifications table based on the skills included within the national syllabus. The items are then validated by DECE on the basis of expert opinion. However, it is important to note that as indicated by assessment co-ordinators, the items are prepared and reviewed by the DECE team. It may therefore be assumed that the expert opinion comes from DECE itself with a heavy reliance on psychometric analyses of the experimental test, which is not a best practice. DECE staff also confirmed that they did not have a written protocol for quality control and did not request assistance from other MEC departments that have experience in preparing items. While these controls were in place previously, subsequent changes in the structure of DECE meant that they are no longer being carried out.

Another document, “National tests, academic achievement assessment in students completing secondary education, syllabus analysis in the area of mathematics,” has been drafted. This draft document specifies that items are subject to independent expert opinion. This is an interesting aspect to consider, but there are several hurdles that may prevent DECE from doing this in practice.

A review of certain tests and items developed by Paraguay shows that the DECE team would benefit greatly from training on how to prepare items.

3.3. Capacity assessment for analysing and using PISA results

Assessment results in Paraguay are delivered by DECE according to the area assessed for the various grades. DECE's reports of results are preceded by guidance for readers and a description of the approach taken for the area assessed (didactics, aspects assessed, technical quality of instruments and analysis model).

Levels of achievement in Paraguay's assessments are determined by IRT ranges and describe what students know and are able to do. In the reports, following the description of the four levels of achievement details are given of the distribution of students in each category as a percentage. Distributions are reported as a total, by area (official and private), by urban and rural area and by gender. Lastly, examples of items are presented in the reports together with indications of their primary characteristics.

The descriptions of levels of achievement in the reports are made on the basis of assessments from 2010. These descriptions are expected to apply in the forthcoming national assessments for 2015, but it is expected that the equivalent ratings will need to be adjusted. One individual from DECE attended a bookmarking workshop but the methodology has not yet been implemented for Paraguay's national tests.

In addition to the general report described above, DECE also generated a second report that was sent to the educational establishments taking part in the assessment. This second report sets out the percentages of students at the establishment and nationally who fall within each level of achievement. This is set out for each area and grade assessed.

3.4 Issues for PISA-D arising from the interviews with DECE staff and other stakeholders

Analysis of the numerous interviews revealed a range of information, views and perceptions regarding the expected focus of PISA for Development in Paraguay and the most important of these are listed below:

- Paraguay's national syllabus is deemed to be life-oriented, although it fails to achieve this objective. PISA can help to inform the implementation of this.
- Teacher training in Paraguay has major shortcomings. It is hoped that PISA will provide a vision regarding the strategy being used to improve it.
- It is important to pass the PISA results on to the teachers to provide guidance for their work and offer them a different perspective.
- Private foundations apply standardised tests in order to select students for the Mathematical Olympiad. The foundations prepare the tests internally.
- The private sector has concerns about how the funds for education are allocated in Paraguay (including making remarks concerning corruption). This could be because certain cities in the country have received public funds for education, and did not report their expenditures.
- There is scant capacity in Paraguay for research and large-scale analysis of assessments.
- While certain recipients of the PISA results in Paraguay expect to use them and benefit from them in their tasks, others hope that the impact of the results will raise awareness of quality issues

among education authorities, teachers and society at large. These respondents also mention the need for appropriate reporting to avoid unnecessary concerns being awoken with unwanted consequences.

- Teacher training does not include large-scale assessment and teacher trainers are unfamiliar with international studies.

Paraguay is a bilingual country. All inhabitants, not merely the indigenous population, speak Guarani. The Minister of Education has decreed that Guarani, with Spanish, are the languages of instruction in school. Schools are currently deemed as bilingual up to 6th grade and it has been sought to extend this to the third cycle and secondary education. Bilingual education up to 6th grade has been established by law; however, in practice it is not known to what extent it is implemented.

4. Capacity development priorities

In the light of the foregoing analysis, the capacity development priorities for each of the three dimensions included in the framework are summarised below.

4.1. Enabling environment

4.1.1. Funding for specific activities

Funding for all PISA for Development activities is assured for Paraguay thanks to a specific project supported by the Fund for Education Excellence, which also supports the LLECE, census-based implementation of the national test and the establishment of the Assessment Institute. However, in the future, any additional assessment will need to secure funding from a specific project.

4.1.2. Assessing and increasing the efficiency of results reports

- Ensuring results reports are more detailed with more sophisticated analyses.
- Conducting multivariate statistical analyses and dimensionality in order to prepare indices.
- Enriching the descriptive capacity of tests.
- Ensuring the DECE implements a communications policy illustrating the link between results and possible measures for improvement in an appealing, understandable manner for the various stakeholders.

4.1.3 Inclusion of out-of-school 15-year-olds

- Techniques for sampling populations with specific characteristics and in cases where no thorough sample frameworks exist.
- Research and interview techniques for home surveys.
- Paraguay has experience in implementing the LAMP test and this may be an encouraging factor, but the individuals who directly participated in this earlier assessment will need to be sought.

4.2. Organisation

4.2.1. Country capacity in assessment, analysis and use of results for monitoring and improvement of education quality

- More staff are required at DECE. The team is too small (around 18 people) to cope with greater demand when it comes to quality control and improvement of assessment instruments.
- The physical offices of DECE are highly restricted in terms of space, and additional premises need to be requested within the main Ministry building, otherwise the security of assessment materials may be jeopardised, even if precautions are taken.
- There is no single team solely responsible for field operations, meaning that implementation of assessments are carried out by working teams formed by individuals from both departments led by the DECE Director. There is also no team devoted to communication and the preparation of results reports.

4.2.2. Enhanced cognitive assessments for below-baseline achievement levels in PISA

- Psychometric analyses of items have been carried out for a number of years with advice and supervision by an external consultant, as the DECE team is not in a position to cope with this task by itself. Definitive learning that will enable them to be fully independent in this process will be highly useful and a factor in Paraguay's economy.
- The fact that DECE does not have written protocols for preparing and validating items shows that major capacity building is needed in this respect for the Directorate to be in a position to implement the PISA items.
- Experience in correcting open questions is restricted to the LLECE tests, ICCS items and National writing tests. Accordingly, in order to adapt to and correct the PISA open questions, major capacity building for DECE is called for in this area.

4.2.3. Enhanced contextual questionnaires and data-collection instruments

- Understanding and adapting the reference framework of the PISA contextual questionnaires to the reality of Paraguay.
- Using a framework to improve and enhance contextual questionnaires for national tests.
- Understanding contextual effects in learning and delivering results accordingly.

4.3. Individual

Paraguay and particularly DECE encounter major problems in using English in respect of PISA for Development. The Directorate currently employs only one individual competent in English and the said person is an external consultant. The Director does not speak or understand spoken English and when she attends meetings she needs to be accompanied by someone who does. To address this situation, recruitment of bilingual staff has been contemplated although this does have the drawback that in all likelihood they will not possess any knowledge or experience in assessment, not to mention the fact that individuals with a command of English are hard to find in Paraguay generally. It is advisable for learning of English to be provided for institutionally to DECE staff.

Notwithstanding the foregoing, the individual capacity of the NPM is sufficient in order to carry out her duties with regard to PISA, but she does need a large, skilled team and more English speaking colleagues.

5. Next steps

Paraguay, and indeed the DECE, possesses adequate experience in learning assessment in order to take part in PISA for Development successfully. It would be highly useful for it to address the capacity building needs stated in this report to avoid encountering major difficulties in implementing this project and to make better use of the results of national assessments.

The use of the capacity needs analysis framework has revealed areas of strength and areas for further development related to PISA for Development in Paraguay. Based on this analysis, a capacity building plan will be developed in collaboration with Paraguay to increase the chances of successful implementation of PISA for Development and to reduce the risks of unnecessary difficulties. To be effective, the components of capacity building will have to be properly costed and will need to work synergistically and be appropriately scheduled in line with the implementation schedule for the assessment. The capacity building plan will also take account of the needs and interests of Paraguay for quality assessments to support educational reform for high student performance.

NOTES

¹ See <http://fondoparalaexcelen.wix.com/feei#!VUIP-79/cnio/i5e5s3t>.

REFERENCES

- Clarke, Marguerite (2012), *What Matters Most for Student Assessment Systems: A Framework Paper*, The World Bank, Washington, DC, <https://openknowledge.worldbank.org/bitstream/handle/10986/17471/682350WP00PUBL0WP10READ0web04019012.pdf?sequence=1>. License: CC BY 3.0 IGO.
- Department for Education Quality Assessment (DECE) (2015), *Análisis curricular de lengua y manual de corrección en la educación media*, prepared by the DECE working team led by Arnaldo Ortiz with Denice Sotto and Cristina Invernizzi, Ministry of Education and Culture of Paraguay, March 2015.
- OECD (2014), *PISA 2015 Technical Standards*, OECD, Paris, www.oecd.org/pisa/pisaproducts/PISA-2015-Technical-Standards.pdf.
- OECD (2013), *PISA for Development Project Document (with Logical Framework)*, OECD, Paris.
- OECD (2012a), *NPM Manual PISA*, OECD, Paris.
- OECD (2012b), *NPM Roles and Responsibilities*, OECD, Paris.
- Treviño, E. (2014), *Factores asociados al logro de los estudiantes: Resultados del Segundo Estudio Regional Comparativo y Explicativo (SERCE)*, Informative Document, December, 2014. Presentation: *Primera Entrega de Resultados, Comparación de Resultados, SERCE-TERCE*, December 4, 2014, Asunción, Paraguay, www.mec.gov.py/cms.

ANNEX A: SUMMARY OF RATINGS FOR CNA DIMENSIONS

This Annex is a direct export of data from the PISA for Development CNA application. The structure of the information is hierarchical, nesting each PISA for Development needs analysis element within: 1) the three CNA dimensions (enabling environment, organisation, individual), 2) PISA for Development project requirements (the sequential operational requirements for implementation of PISA), and 3) the five PISA for Development programme outputs (enhanced questionnaires, enhanced assessments, out of school 15-year-olds, assessment capacity, and peer-to-peer learning). The original references for each CNA element are listed below the element description. The references describe the original source document and the numerical designation of the defining element. In documents where the elements are not enumerated, such as the NPM manual, the reference describes the relevant section heading. The rating for each element on the rubric is justified with reference to specific contextual details in Paraguay.

Summary of Ratings for CNA Dimensions

Enabling environment	Latent	1	2%
	Emerging	8	21%
	Established	22	46%
	Advanced	14	31%
Organisation	Latent	2	6%
	Emerging	5	11%
	Established	17	51%
	Advanced	11	31%
Individual	Latent	1	5%
	Emerging	2	9%
	Established	6	27%
	Advanced	13	46%

CNA Dimension 1. Enabling environment

Project Requirement 1. Designation of NPM and establishment of National Centre

1. Stability of NLSA programme

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
No NLSA exercise has taken place.	The NLSA has been operating on an irregular basis.	The NLSA is a stable programme that has been operating regularly.	

Justification: Assessments have not followed a consistent or stable pattern of frequency because the programmes depend on raising the necessary funds.

2. Having regular funding for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC3

Latent	Emerging	Established	Advanced
There is no funding allocated to the NLSA.	There is irregular funding allocated to the NLSA	There is regular funding allocated to the NLSA	

Justification: Funding for NLSA has not been regular and Paraguay has needed external funding for this activity. It is not within the national general budget.

3. Adequacy of NLSA funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC3

Latent	Emerging	Established	Advanced
	Funding covers some core NLSA activities: design, administration, analysis or reporting.	Funding covers all core NLSA activities: design, administration, analysis and reporting.	

Justification: Once DECE receives the funds for assessments, it is responsible for budgeting for all requirements.

4. Relevance of NC expertise

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA: NLSA

Latent	Emerging	Established	Advanced
There is no staff allocated for running a NLSA.	The NLSA office is inadequately staffed to effectively carry out the assessment.	The NLSA office is adequately staffed to carry out the NLSA effectively, with minimal issues.	The NLSA office is adequately staffed to carry out the NLSA effectively, with no issues.

Justification: Paraguay has carried out seven national assessments since 1996. However, DECE has only sixteen people available for managing the assessments and this is not adequate.

5. Experience in planning, organising and conducting large-scale surveys

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA: NLSA

Latent	Emerging	Established	Advanced
The country/system does not offer opportunities that prepare individuals for work on NLSA.		The country/system offers some opportunities to prepare individuals for work on the NLSA.	The country/system offers a wide range of opportunities to prepare individuals for work on the NLSA.

Justification: DECE has funds for developing a Master's programme in learning assessment with OEI and this is under way with the support of FLACSO, a registered educational institution in Paraguay. Several DECE staff are enrolled on this programme.

6. Experience in planning, organising and conducting international assessments

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA: ILSA

Latent	Emerging	Established	Advanced
The country/system has not participated in an ILSA in the last 10 years.		The country/system has participated in at least one ILSA in the last 10 years.	The country/system has participated in two or more ILSA in the last 10 years.

Justification: DECE has participated in every LLECE study (PERCE, SERCE AND TERCE) as well as in ICCS.

7. Having regular funding for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC2

Latent	Emerging	Established	Advanced
There is no funding for participation in ILSA.	There is funding from loans or external donors.	There is regular funding allocated at discretion.	There is regular funding approved by law, decree or norm.

Justification: Paraguay has always obtained the necessary funds for participating in LLECE and is able to fully fund its participation in PISA-D.

8. Adequacy of ILSA funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC2

Latent	Emerging	Established	Advanced
	Funding covers some core activities of the ILSA.	Funding covers all core activities of the ILSA.	

Justification: Paraguay has confirmed the budget to cover the whole PISA-D process.

9. Bureaucratic efficiency

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 19.1, PISA Technical Standards: Standard 1.1, PISA Technical Standards: Standard 7.1, PISA Technical Standards: Standard 14.1, PISA Technical Standards: Standard 14.2, PISA Technical Standards: Standard 15.1, PISA Technical Standards: Standard 15.2, PISA Technical Standards: Standard 15.3, PISA Technical Standards: Standard 15.4

Latent	Emerging	Established	Advanced
Stakeholders and the NC have no direct communication		Channels for communication involve unnecessary third parties	Communication channels allow direct institutional access between NC and stakeholders

Justification: Currently, DECE needs to go through the General Direction for Educational Planning (DGPE) for all communications.

10. Efficiency of communication protocols

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.1, PISA Technical Standards: Standard 14.1, PISA Technical Standards: Standard 14.2, PISA Technical Standards: Standard 15.1, PISA Technical Standards: Standard 15.2, PISA Technical Standards: Standard 15.3, PISA Technical Standards: Standard 15.4, NPM Manual: Communication (NPM/NC responsibilities)

Latent	Emerging	Established	Advanced
The NPM is not able to engage directly or indirectly with key stakeholders	The NPM can engage stakeholders but only indirectly through higher management levels	The NPM can engage directly stakeholders but in a formal or subordinate role (i.e., with restricted exchange of communication)	The NPM can engage most stakeholders as a peer

Justification: Official contacts must go through the General Direction for Educational Planning.

11. Communication with stakeholders

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 19.1, PISA Technical Standards: Standard 1.1, PISA Technical Standards: Standard 7.1, PISA Technical Standards: Standard 14.1, PISA Technical Standards: Standard 14.2, PISA Technical Standards: Standard 15.1, PISA Technical Standards: Standard 15.2, PISA Technical Standards: Standard 15.3, PISA Technical Standards: Standard 15.4, NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
There is no regular communication between NC and stakeholders	The NC interacts with a network of contacts representing each stakeholder organisation	The NC provides regular updates or bulletins to stakeholders	The NC has regular meetings or accessible forums with stakeholders for two-way discussions

Justification: DECE is co-ordinated with the General Direction for Educational Planning (DGPE)

12. NLSA research and development funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC3

Latent	Emerging	Established	Advanced
	Funding does not cover research and development activities	Funding covers some professional development activities	Funding covers research and development activities

Justification: When funds are raised for any project, they include development resources and this is the case for PISA-D.

13. Having strong organisational structures for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC4

Latent	Emerging	Established	Advanced
There is no NLSA office, ad hoc unit or team	The NLSA office is a temporary agency or group of people	The NLSA office is a permanent agency, institution, or unit	The NLSA office is an independently-funded and operating agency, institution, or unit

Justification: DECE is a long established unit of the Ministry.

14. Autonomy of NLSA structures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC4

Latent	Emerging	Established	Advanced
	Political considerations regularly hamper technical considerations	Political considerations sometimes hamper technical considerations	Political considerations never hamper technical considerations

Justification: Political considerations affect the decision to participate in new assessment projects.

15. Accountability of LSA structures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA: NLSA

Latent	Emerging	Established	Advanced
	The NLSA office is not accountable to a clearly recognised body	The NLSA office is accountable to a clearly recognised body	

Justification: DECE is accountable to the Ministry hierarchy as well as the national government financial watchdog.

16. ILSA research and development funding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC2

Latent	Emerging	Established	Advanced
Funding does not cover research and development activities.		Funding covers some professional development activities.	Funding covers research and development activities.

Justification: This is a requirement of the international contractors in PISA-D.

Project Requirement 2. Compiling and confirming information on schools and students for the definition of the assessment population

17. Geography and climate obstacles

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA for Development Document

Latent	Emerging	Established	Advanced
Large segments of the population are inaccessible to data collectors	Quality of transportation networks deny access of data collectors to certain regions	Quality of transportation networks limits the ability to reach certain regions under certain weather conditions	All regions are accessible

Justification: Some regions are difficult to access, especially if it is raining, but it can be overcome with extra resources.

18. Security issues with data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA for Development Document

Latent	Emerging	Established	Advanced
Lack of security prevents data collection for large segments of the population	Civil unrest makes certain regions inaccessible to data collectors	Civil unrest requires additional security to ensure the safety of personnel and integrity of data in certain regions	All regions are accessible

Justification: Up to now, DECE has had no problem in accessing all regions of the country.

19. Effect of political climate on implementation

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA for Development Document

Latent	Emerging	Established	Advanced
Political conflict prevents project from proceeding	Political tensions introduce bureaucratic difficulties which reduce the ability of the NPM to reach consensus with stakeholders or meet timelines	Political climate does not adversely affect the project	All relevant political bodies (government and opposition) actively support the project

Justification: The current government is much in favour of assessment. In addition, once funds are obtained, there have never been impediments to continue the project because of political decisions.

20. Reliability of student attendance

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.10

Latent	Emerging	Established	Advanced
Student attendance is unreliable and/or not monitored	Student attendance may be monitored but is vulnerable to out-of-school factors (e.g., work, weather)	Student attendance is reliable but is not formally monitored with attendance records	Student attendance is reliable, monitored, and enforced with attendance policies

Justification: Schools have reliable records and test administrators reinforce attendance or have complementary testing sessions.

21. Quality of school sample frame

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.6, PISA Technical Standards: Standard 9.3, PISA Technical Standards: Standard 16.1

Latent	Emerging	Established	Advanced
There is no EMIS or equivalent infrastructure to provide a school sampling frame	An EMIS is present but is not used or is not accessible for confidentiality or bureaucratic reasons	An EMIS exists and is accessible but is not updated regularly or the frame is inaccurate (missing schools or have schools that don't exist)	An EMIS is updated annually with an accurate frame

Justification: DECE needs to confirm the data available in the EMIS before test administration; UIS's assessment of system level data will help with this.

22. Level of detail in administrative student data

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.6, PISA Technical Standards: Standard 9.3, PISA Technical Standards: Standard 16.1

Latent	Emerging	Established	Advanced
No student data (e.g., grade, age) is available for individual schools	Student data (e.g., grade, age) is recorded in aggregate at the school level	Students data are recorded in central records that link student name and school name	Students have profiles and personal identification numbers that persist across grades and schools

Justification: Paraguay does not have a unique identification for each student or the date on which they were born in the EMIS file.

23. Scheduling conflicts due to local political activities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA for Development Document

Latent	Emerging	Established	Advanced
Regional resources are not available due to conflicting or uncertain availability	Uncertainty over the timing of magnitude of political or civic events results in inability of individuals, institutions, or regions to commit to participating in PISA	Use of common resources (schools, teachers/ head teachers) causes scheduling conflicts with implementation of PISA in schools	Scheduled political or civic activities do not adversely affect the project

Justification: Political or civic activities has never hampered a test administration.

24. 15-year-old census

Programme output: Including out-of-school 15-year-olds

References: PISA for Development Document

Latent	Emerging	Established	Advanced
No information is available about out-of-school 15-year-olds	Information about out-of-school 15-year-olds is available from data sources updated with >5 year frequency	Information about out-of-school 15-year-olds is available from data sources updated with 2-5 year frequency	Information about out-of-school 15-year-olds is available from data sources updated annually

Justification: The last census is from 2012 and the NSO is still working on it. Depending on availability of this data, DECE may need to use the census of 2002.

25. Location of 15-year-olds

Programme output: Including out-of-school 15-year-olds

References: PISA for Development Document

Latent	Emerging	Established	Advanced
No information is available about geographic location of 15-year-olds	Information about location of 15-year-olds is at regional levels (e.g., number of 15-year-olds in each province)	Information about location is at community or district levels (e.g., number of 15-year-olds in each community)	Information about location includes household addresses of 15-year-olds

Justification: The addresses are in the census.

Project Requirement 3. Stipulation of languages in which assessment materials will need to be available

26. Information on student language of instruction

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 2.1

Latent	Emerging	Established	Advanced
No student records are available	Student records are available but do not store dominant language of instruction	Student information records the dominant language of instruction	Student information records the language of instruction for each subject

Justification: Up to ninth grade it is possible to have bilingual schooling (Spanish and Guaraní), but most secondary school classes are conducted in Spanish.

27. Information on school language of instruction

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 2.1

Latent	Emerging	Established	Advanced
There is no EMIS or equivalent system	School information is centrally stored but without language of instruction	School information contains predominant language of instruction	

Justification: Language of instruction may be Spanish from 4th grade onwards, but many times teachers speaks Guaraní to explain things. There is no register of what really happens. Schools should be bilingual when students' first language is Guaraní. The law reinforces this up to 9th grade and some people are trying to move it onwards to Educación Media. But, it very much depends on teachers.

Project Requirement 4. Definition of criteria for stratification of school and student samples

28. Clear statement of purpose for participation in NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
There is no policy document pertaining to NLSA.	There is an informal or draft policy document that authorises the NLSA.	There is a formal policy document that authorises the NLSA.	

Justification: Because NLSA is subject to the available funding.

29. Transparent policy for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
	The policy document is not available to the public.	The policy document is available to the public.	

Justification: Since there is no policy document, it cannot be available.

30. Clear statement of purpose for participation in ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC1

Latent	Emerging	Established	Advanced
There is no policy document that addresses participation in ILSA.	There is an informal or draft policy document that addresses participation in ILSA.	There is a formal policy document that addresses participation in ILSA.	

Justification: For each international study there is a signed official agreement. DECE has a project approved by the Minister and funded by FONACIDE. The project includes Pisa for Development and the next LLECE study.

31. Use of ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement.

References: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
If any, country/system-specific results and information from the ILSA are not used to inform decision making in the country/system.	Results from the ILSA are used in a limited way to inform decision making in the country/system.	Results from the ILSA are used in some ways to inform decision making in the country/system.	Results from the ILSA are used in a variety of ways to inform decision making in the country/system.

Justification: ILSA results are used to justify some projects and development planning.

32. Stakeholder use of LSA data

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 19.1

Latent	Emerging	Established	Advanced
No stakeholders use of LSA	Stakeholders reference reported average scores and 'passing' percentages from published LSA information	Stakeholders commission specialised reports or reference correlations and other specific information from LSA	Stakeholders actively analyse data for specific information

Justification: Stakeholders ask for data with different aggregation for their needs. The Research and Development Centre of the Ministry is just starting to directly analyse the data bases.

Project Requirement 9. Communication and co-ordination with schools that will participate in the assessment

33. Engagement of data collection agency or network with collection sites (e.g., schools)

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.6

Latent	Emerging	Established	Advanced
	The NC has contact information for individuals with access to school sites	The NC has intermittent administrative contact with schools or contact through previous LSA	The NC has regular contact with schools through professional development and/or previous LSA activities

Justification: After each LSA, DECE staff go to each sampled school to explain national results as well as their own results.

34. Perceptions of external survey-based large-scale assessment (LSA) of lower-level stakeholders

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.10

Latent	Emerging	Established	Advanced
Stakeholders have no knowledge of external LSA or assume that LSA is used to evaluate specific school performance	Stakeholders understand LSA is not antagonistic but see it as an unnecessary disruption	Stakeholders recognise a clear washback effect from the results of LSA and the policies and practices affecting learning	Stakeholders recognise external uses of LSA information and make internal use of LSA results to inform policy and practice

Justification: There is some differences of views among lower-level stakeholders. Some complain because they do not receive results as quickly as they would like. Sometimes these stakeholders have directly opposed the assessment in their schools. Because they think it is threatening and that they are the only ones entitled to assess their students.

Project Requirement 14. Establishing a training plan with key staff of the NC to attend training sessions

35. Funding for NPM/NC for international training and meetings

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: International participation

Latent	Emerging	Established	Advanced
No budget or time exists for international training	Ad hoc funds are allocated, when available, to support participation in international training and meetings	Institutional participation is formally committed, with funding from a variety of sources	Dedicated funds are available for participation in international training and meetings

36. Funds are available to cover the costs of NPM/NC participation in international training and meetings

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: International participation

Latent	Emerging	Established	Advanced
Staff are prevented from participating in international activities due to restrictions on personal or professional travel	No time is allocated for international activities, and they are completely external to staff's institutional responsibilities	Participation in international activities is within the scope of institutional responsibilities, but in addition to regular responsibilities	Time is specifically allocated to participation in and preparation for international activities

Justification: DECE is planning to hire more staff. DECE has to administer this year (2015) the final NLSA which will be a census for the first time. The results for that test must be delivered on July-

August 2018. Without additional staff it will be difficult for DECE to manage this and participation in PISA-D.

37. Participation in previous international ILSA training

Programme output: Identify peer-to-peer learning opportunities regarding PISA participation with other countries and development partners

References: SABER-SA-ILSA: SA1

Latent	Emerging	Established	Advanced
The ILSA team has not attended international workshops or meetings.	The ILSA team attended some international workshops or meetings.	The ILSA team attended all international workshops or meetings.	

Justification: DECE reports that its staff attended all international workshops and meetings associated with the ILSAs it has participated in.

Project Requirement 25. NPM develops a national dissemination plan of their country's participation in PISA for Development and the relevant results from the pilot

38. Expectations for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC1

Latent	Emerging	Established	Advanced
There is no plan for NLSA activity.		There is a general understanding that the NLSA will take place.	There is a written NLSA plan for the coming years.

Justification: DECE are currently finalising the test assembling, for the test that will be administered in 2015. There is no doubt that this will take place.

39. Having strong public engagement for NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: EC2

Latent	Emerging	Established	Advanced
All stakeholder groups strongly oppose the NLSA.	Some stakeholder groups oppose the NLSA.	Most stakeholder groups support the NLSA.	All stakeholder groups support the NLSA.

Justification: There are several Research Groups, Organisations, Private and Governmental Sectors, that back and support NLSA.

Project Requirement 27. The NPM provides input and guidance with regards to the policy priorities that should help determine the content and analysis presented in the country report

40. Setting clear policies for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC1

Latent	Emerging	Established	Advanced
	The policy document is not available to the public.	The policy document is available to the public.	

Justification: The ILSA agreements are kept within the Ministry.

41. Contributions to ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: AQ1

Latent	Emerging	Established	Advanced
The country/system has not contributed new knowledge on ILSA.			The country/system has contributed new knowledge on ILSA.

Justification: DECE staff have participated in international meetings, sharing their own realities and exchanging experiences with other Latin American countries (they have signed agreements).

42. Dissemination of ILSA results

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
If any, country/system-specific results and information are not disseminated in the country/system.	Country/system-specific results and information are disseminated irregularly in the country/system.	Country/system-specific results and information are regularly disseminated in the country/system.	Country/system-specific results and information are regularly and widely disseminated in the country/system.

Justification: DECE has combined a general result release to a wide public with visits to each sampled school.

43. Feedback from ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
Products to provide feedback to schools and educators about the ILSA results are not made available.		Products to provide feedback to schools and educators about the ILSA results are sometimes made available.	Products to provide feedback to schools and educators about ILSA results are systematically made available.

Justification: In addition to general publication, after each result release DECE goes to every sampled school to inform them of test results.

44. Breadth of stakeholder engagement

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 19.1

Latent	Emerging	Established	Advanced
Only the K-12 sector is engaged in LSA	K-12, TEVET and University sectors are engaged in LSA	Multiple stakeholders representing public interests including education and non-education sectors are engaged	Multiple stakeholders are engaged including non-government or indirect educational stakeholders

Justification: Stakeholders include Education Ministry staff from different Directorates that have shown interest as well as people from the private sector, such as ONGs (OMAPA, *Juntos por la Educación*, *Instituto de Desarrollo*, etc.). Also stakeholders from other government institutions.

45. Media coverage of ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
There is no media coverage of the ILSA results.	There is media coverage of the national averages and percentages from ILSA results.	There is national media coverage of the ILSA results beyond national averages/percentages that includes correlations and demographic comparisons.	There is national and local media coverage of detailed ILSA results.

Justification: Articles related to ILSA are available in the media.

46. Positive washback of ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: AQ2

Latent	Emerging	Established	Advanced
It is not clear that decisions based on ILSA results have had a positive impact on students' achievement levels.		ILSA results have influenced decision-making intended to improve students' achievement levels.	Decisions based on the ILSA results have had a positive impact on students' achievement levels.

Justification: Because of the poor results of some assessments, these have fostered the development of some projects to improve student achievements.

47. Learning needs for non-academic outcomes

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

References: PISA for Development Document

Latent	Emerging	Established	Advanced
No attention is given in the education sector to non-academic skills		The trade/vocational training sector defines foundational skills for occupational training	A framework extends the K-12 curricula to adult competencies relevant to local contexts (including economy, citizenship, etc.)

Justification: The curricula is quite broad and includes IT, in this framework the teacher has the possibility to adjust the content according to the needs of students.

Project Requirement 32. Planning of the quality assurance process so that Quality Monitors visit a sample of schools during testing sessions to observe and document quality of sessions

48. Monitoring of collection procedures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 9.3

Latent	Emerging	Established	Advanced
	Institutions or individual stakeholders may nominate or exclude specific sites from monitoring	Monitored sites are selected randomly with ad hoc exclusions	Monitored sites are randomly sampled and the rationale for any exclusions from site monitoring is agreed upon prior to sampling

Justification: There are monitors who administer a quality assurance form.

CNA Dimension 2. Organisation*Project Requirement 1. Designation of NPM and establishment of National Centre*

49. National co-ordinator for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC3

Latent	Emerging	Established	Advanced
There is no team or national/system co-ordinator to carry out the ILSA activities.	There is a team or national/system co-ordinator to carry out the ILSA activities.	There is a team and national/system co-ordinator to carry out the ILSA activities.	

Justification: The NPM is the Director of the Education Quality Assessment Directorate and plans to have help from the current team and from people to be hired with the budget of the project.

50. Effectiveness of human resources for ILSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC3

Latent	Emerging	Established	Advanced
	The ILSA office is inadequately staffed or trained to carry out the assessment effectively.	The ILSA office is adequately staffed or trained to carry out the ILSA effectively, with minimal issues.	The ILSA office is adequately staffed and trained to carry out the ILSA effectively, with no issues.

Justification: DECE's staff complement is very small (16 people), but the Directorate is planning to hire more people.

51. Scheduling priority given to ILSA activities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NC staff are typically assigned higher priority requests related to other projects	NC staff are typically required to immediately attend or do not reschedule meeting requests from managers or colleagues (i.e., meeting requests take priority over pending work)	NC staff manage their own schedules and may reschedule ad hoc meeting requests	Administrative support for NC intercepts and schedules or co-ordinates ad hoc meeting requests on behalf of NC staff

Justification: Because things are not planned in advance, everything is requested at the last moment and requires immediate answers. There are many emergent activities that require immediate action.

52. Availability of NPM

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NPM time is committed as required, in addition to regular responsibilities	Part time commitments from one or more people do not adequately cover the minimum PISA commitment (2 full-time equivalents). PISA responsibilities are managed through paid or unpaid overtime	Sufficient time commitments are made by NC staff to meet PISA demands, but no individuals are assigned full-time to PISA responsibilities	Sufficient person-time is allocated to PISA with at least one full-time (non-clerical) NC staff member.

Justification: DECE expects to hire one person to work exclusively on PISA-D, while other staff will work on PISA and other assessments.

53. Engagement of clerical/administrative support

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 17.4

Latent	Emerging	Established	Advanced
Clerical support is not involved in correspondence (NPM manages all correspondence directly)		Clerical support distributes outgoing correspondence from NC	Clerical support is the initial point of contact and/or has access to all incoming and outgoing correspondence

Justification: There are two secretaries for the Directorate, but the focus of their work depends on the orientations of the Director.

54. National Centre co-ordination

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NC staff have no set schedule of appointments or meetings		Staff meetings are scheduled and attended regularly	NC staff use shared agendas to enable regular and ad hoc scheduling of meetings

Justification: The DECE team set meetings according to what is required.

55. Access to a reliable, high bandwidth Internet connection and e-mail facilities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
NC has no internet access	NC has low bandwidth or unreliable internet	Reliable, high bandwidth internet is available onsite at selected terminals within the NC	NC has a fully networked environment with universal access to high bandwidth internet and email

Justification: In the consultant's first visit to DECE there multiple problems with internet access and these seemed to be permanent. DECE plans to improve this situation with its PISA-D funds. On the consultant's second visit to DECE the internet worked quite well so it was classified as established.

56. Computing environment

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
Not all staff have full-time computer access or do not have access to document and spreadsheet applications	NC relies on personal computers of staff running Windows XP or later with Microsoft Office professional (2007 or later); all computers include Excel and Word applications but do not connect to a workplace network	NC staff all have personal or dedicated computers with standard software; access to the workplace network may be limited	NC has dedicated workplace computers for all staff with standard software and network access

Justification: Computers are assigned adequately according to the requirement of each official in charge.

57. Data quality of ILSA

Programme output: Identify peer-to-peer learning opportunities regarding PISA participation with other countries and development partners

References: SABER-SA-ILSA: AQ1

Latent	Emerging	Established	Advanced
Data from the ILSA have not been published.	The country/system met sufficient standards to have its data presented beneath the main display of the international report or in an annex.	The country/system met all technical standards required to have its data presented in the main displays of the international report.	

Justification: There have never been any problems in this regard.

58. Local capacity building for ILSA

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: SABER-SA-ILSA: SA1

Latent	Emerging	Established	Advanced
The country/system offers no opportunities to learn about ILSA.		The country/system offers some opportunities to learn about ILSA.	The country/system offers a wide range of opportunities to learn about ILSA.

Justification: The general public is informed through the press and officers from the Ministry assist the general launch results. Participating schools receive their report.

Project Requirement 5. Establishing security protocols for the National Centre and for national sub-contractors

59. Integrity of coding

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 11.4

Latent	Emerging	Established	Advanced
	Coders are selected from bureaucratic appointments or personal networks	Coders are selected from nominated applicants using transparent criteria	

Justification: DECE launches calls for tender to identify experts in the subjects to be coders.

60. Computing security

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
Security software is limited to pre-installed software on personal or office computers	Staff are personally responsible for maintaining antivirus and software updates without supervision	Staff follow institutional policies regarding regular software and antivirus definition updates	Dedicated IT staff or network policies ensure all software updates are installed at the institutional level

Justification: DECE can call for IT support from the central Ministry. DECE are also planning to have a permanent IT support in the Directorate.

61. Accountability for security

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
There are no consequences for breaches in security	There are ad hoc or discretionary policies regarding how to respond to breaches in security	There are discipline policies for breaches in security with ad hoc or discretionary consequences and individuals with access to secure materials are aware of security protocols	Where uncontrolled access is possible, legally binding confidentiality agreements enforce the data access restrictions and apply to all staff

Justification: All DECE staff contracts have a confidentiality clause and only they have access to their equipment.

62. Secure storage of completed materials following data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
No secure facilities are available to the NC		Repurposed storage or private office space is used to secure materials within the NC	NC facilities have a specific security infrastructure for storing data collection materials (i.e. it is not physically possible for individuals to access secure material without it being granted by NPM)

Justification: Current storage space in DECE is extremely small. But in the project there are plans and funds to rent a big site for storing material.

63. Adherence to security protocols

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
NC staff and partners have no experience with or no culture of security	There is a legal or administrative framework for accountability with respect to security	Staff with access to secure materials receive training in security protocols	All staff receive training in security protocols

Justification: There is no formal training but it is in the institutional culture of DECE that all materials and database must be kept secure. In addition, because of low stakes in the DECE assessments there is not much interest in accessing material.

64. Security auditing

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 8.1, PISA Technical Standards: Standard 18.2

Latent	Emerging	Established	Advanced
No tracking is made of access to secure materials	A list of individuals with permission is used to grant access to secure materials	The NPM can invoke or revoke access for any individual on the permitted list at any time	Access to secure materials is verified and recorded every time the material is accessed

Justification: This is true for all DECE staff (16), but only they can access confidential material.

65. Secure space for conducting the coding operations

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
No facilities are available	Multi-purpose facilities outside the NC are available for coding	Multi-purpose facilities within the NC may be secured for coding	Dedicated secured facilities are available

Justification: There is no space within the NC, but the Ministry provides a floor for this purpose which is arranged specifically with new locking devices.

66. Software resources

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: Resources of the National Centre

Latent	Emerging	Established	Advanced
There is no mechanism for acquiring specialised software that is not already installed with computer at time of purchase	Individuals may download or purchase software for their own use without technical support or oversight	Individuals may download or purchase software for their own use but have access to institutional copies of required software	The NC administration maintains software licenses and manages acquisition and installation of necessary software

Justification: Only IT staff of the Ministry/DECE can download or install software.

Project Requirement 9. Communication and co-ordination with schools that will participate in the assessment

67. Sufficiency of data collection staff

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.7, PISA Technical Standards: Standard 1.8, PISA Technical Standards: Standard 3.1

Latent	Emerging	Established	Advanced
There are no available data collections staff	Available data collection staff are inexperienced, poorly trained, or do not have appropriate linguistic skills	There are few trained data collectors who must travel to many sites or many inexperienced or linguistically challenged data collectors	There is a sufficient number of qualified data collectors for all sites

Justification: data collectors are selected by DECE through a public bidding process as required.

Project Requirement 14. Establishing a training plan with key staff of the NC to attend training sessions

68. Availability of ILSA training

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: SA1

Latent	Emerging	Established	Advanced
		Opportunities to learn about ILSA are available to the country's/system's ILSA team members only.	Opportunities to learn about ILSA are available to a wide audience, in addition to the country's/system's ILSA team members.

Justification: There is information in the press, individual reports are distributed to schools in the sample and there is a significant event to mark each result release.

Project Requirement 24. Recruitment and training of test administrators that do not have any direct relationship to the students that will be assessed and that are experienced and competent enough to carry out the testing sessions following the scripts, guidelines and procedures established

69. Commitment of data collection staff

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.7, PISA Technical Standards: Standard 3.1, PISA Technical Standards: Standard 1.3

Latent	Emerging	Established	Advanced
Insufficient data collection staff	Data collection staff are part-time, shared with other institutions	Data collection staff are part-time, shared with other projects in the same institution	Data collection staff are specifically hired or reassigned for this role/project

Justification: The data collection staff are well trained by the staff of the National Centre and closely supervised.

70. Availability of training facilities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 6.2, PISA Technical Standards: Standard 11.2

Latent	Emerging	Established	Advanced
No facilities available (self-study or one-one-one)		Existing facilities may be repurposed to accommodate training	A dedicated training environment is available

Justification: When it is required DECE look for an adequate additional space ensuring security.

71. Avoidance of conflicting interests

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 6.3

Latent	Emerging	Established	Advanced
Hiring for data collection is treated as casual employment	The NC maintains employment records of data collectors	Employment records include subjects taught by data collectors and schools worked at	Employment framework require data collectors to disclose any potential conflict of interest

Justification: If there is any conflict of interest the system would now allow their payment. Hence, they have to disclose the information beforehand to DECE.

72. Commitment of data collectors to training

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 6.2

Latent	Emerging	Established	Advanced
There is no provision or time for training	Data collectors must volunteer time or training time conflicts with regular responsibilities	Data collector time is compensated but regular responsibilities may conflict with the training schedule	Training time is compensated and is integrated with regular duties (or staff are hired exclusively for data collection)

Justification: Data collectors are hired exclusively for this purpose on a short term basis.

73. Household survey collection

Programme output: Including out-of-school 15-year-olds

References: PISA for Development Document

Latent	Emerging	Established	Advanced
The no in-country capacity to conduct national surveys	Public or private data collection agencies are available but do not have capacity for national surveys	The NC has access to service providers with national survey capacity	National centre staff already has staff or existing relationship with resources for national survey collection

Justification: There are very few providers in Paraguay, not even enough to satisfy the need to have THREE qualified candidates for each assignment. However, the National Centre has experience of household surveys with LAMP.

74. Correct sequencing of administration of national options

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: PISA Technical Standards: Standard 7.2

Latent	Emerging	Established	Advanced
Data collection staff have been/will be given instructions on the protocols	Data collection staff have been/will be trained after PISA design has been finalised	Data collection staff have been/will be trained using the final instruments	Final administration protocols are/will be sequentially scripted and bound and provided with the international testing materials

Justification: DECE has the conviction that they will follow every protocol for PISA-D.

Project Requirement 25. NPM develops a national dissemination plan of their country's participation in PISA for Development and the relevant results from the pilot

75. Providing teachers with opportunities to learn about the NLSA

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-NLSA: SA2

Latent	Emerging	Established	Advanced
There are no courses or workshops on the NLSA.	There are occasional courses or workshops on the NLSA.	There are some courses or workshops on the NLSA offered on a regular basis.	There are widely available high quality courses or workshops on the NLSA offered on a regular basis.

Justification: Teachers from sampled schools receive training for understanding, interpreting and using results.

Project Requirement 26. Preparing and distributing testing materials to schools in a secure fashion, ensuring materials arrive safely and without suffering damage or alterations

76. Booklet distribution infrastructure

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA for Development Document

Latent	Emerging	Established	Advanced
Only ad hoc or site-specific printing resources are available		Service provider(s) or internal staff may be contracted or re-tasked to print and distribute booklets but must be trained with proper protocols	Existing infrastructure can be used to transport testing materials using pre-existing security protocols

Justification: The printing service is completely independent from the transportation of materials function. Cannot be classified.

77. Adequacy of transportation for data collectors

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.7, PISA Technical Standards: Standard 3.1, PISA Technical Standards: Standard 1.3

Latent	Emerging	Established	Advanced
	Data collectors use public or shared transportation or use personal transportation without reimbursement	Data collectors use personal vehicles with reimbursement	Data collectors use dedicated institutional vehicles

Justification: For the forthcoming census, testing trucks will be rented in addition to personal vehicles of the collectors.

Project Requirement 28. Co-ordination of appropriate enhancements/adaptations/translations of instruments, manuals and guides, and field trial and verification process with international contractors

78. Effectiveness of training for data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 6.1

Latent	Emerging	Established	Advanced
	Training for data collection consists of review of protocols or may not be standardised	Training for data collection is conducted individually	Training for data collection is conducted in group settings with feedback between trainees

Justification: Training is conducted by the Department Co-ordinator and the local Co-ordinator on site to the group of test administrators.

79. Availability of document formatting and print specifications

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: PISA Technical Standards: Standard 10.2, PISA Technical Standards: Standard 10.3, PISA Technical Standards: Standard 10.4, NPM Manual: NC responsibilities

Latent	Emerging	Established	Advanced
Authors choose formats for their own documents	Document and print specifications are not standardised or easily accessible	All document print and specifications are maintained in manuals accessible to all NC staff	

Justification: Only logos have formal requirements and specifications. For everything else there is no formal requirement.

Project Requirement 29. Monitoring of school and student response rates, in co-ordination with international and national contractors, as appropriate

80. Responsiveness of sample design to data collection activities

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.6

Latent	Emerging	Established	Advanced
There no updates on sampling or non-response provided during data collection period		The data collection to is periodically updated to respond to sample non-response and assign replacements	Daily or real-time updates on data collection or sample design are available from centralised data processing

Justification: Department Co-ordinators keep control and final check and contrast with the sample is done by the NC data processing.

Project Requirement 30. Organisation of plans for local printing of assessment materials and verification of print and paper quality in all languages that will be covered, while maintaining security

81. Quality of document proofing

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: PISA Technical Standards: Standard 10.2, PISA Technical Standards: Standard 10.3, PISA Technical Standards: Standard 10.4, Publishing (NC responsibilities)

Latent	Emerging	Established	Advanced
Authors are responsible for proofing their own documents		Document production relies on informal experience using individual expertise or idiosyncratic methods	Clear protocols exist for the identification of potential typographic errors and/or the NC has an official dictionary and manual of style

Justification: DECE does not have manuals to govern document production.

82. Availability and quality of publishing resources

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: NPM Manual: NC responsibilities, PISA Technical Standards: Standard 10.1

Latent	Emerging	Established	Advanced
NC has no existing relationship with publishers or publishing resources		NC has access to publishers with appropriate print quality and binding options but may require several firms to accommodate volume	A dedicated outsourced publisher can accommodate the print volume in the desired time span prior to data collection or NC has in-house resources to handle publishing

Justification: There are good quality printers available but the problem is that DECE does not often produce materials on time.

Project Requirement 31. Planning of staffing and resources (technical and material) needed for coding of test booklets and contextual questionnaires and data management

83. Fidelity of response coding

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: PISA Technical Standards: Standard 11.3

Latent	Emerging	Established	Advanced
Response coders and managers have not received or are not acquainted with operations manual from the NPM	Coders and managers have access to the operations manual	The operations manual is used directly in training for and management of coding activities	

Justification: The Manual is available and in use.

Project Requirement 32. Planning of the quality assurance process so that Quality Monitors visit a sample of schools during testing sessions to observe and document quality of sessions

84. Data collection monitoring

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 9.1

Latent	Emerging	Established	Advanced
There is an insufficient quantity of external monitors	Monitors do not receive the same training or same quality of training in data collection as data collectors (see PISA Technical Standards: Standard 6)	Selected monitors are also trained as data collectors	All monitors are trained as data collectors

Justification: The monitors and data collectors are trained at the same time, so that if any test administrator fails, he/she can be replaced by a monitor.

CNA Dimension 3. Individual

Project Requirement 1. Designation of NPM and establishment of National Centre

85. Adherence to protocol

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 18.2, PISA Technical Standards: Standard 17.5, PISA Technical Standards: Standard 1.2, PISA Technical Standards: Standard 9.2

Latent	Emerging	Established	Advanced
Data processing staff have no experience with large scale data processing protocols		Data processing staff have experience carrying out specific instructions in specific contexts	Data processing staff have experience operating with a variety of protocols in different contexts

Justification: All data processing staff have gone through NLSA and ILSA.

86. NPM experience with dissemination of results from large scale assessment

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
LSA reports statistical results only	LSA reports include statistical tables and descriptions of statistical comparisons and notes where differences are substantive or significant	LSA reporting uses narratives to relate results from separate statistical results or data sets	LSA reporting uses multiple narratives to multiple audiences, referencing relevant data where appropriate

Justification: Result Reports are mostly descriptive and addressed to the general public.

87. NPM regularity of communication

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NPM has no email or voicemail	NPM has limited access to email and/or voicemail	NPM can access and respond to email and voicemail at least once a day	NPM can process all incoming email and voicemail each day

Justification: The NPM tries to answer as soon as possible and is generally on top of things.

88. NPM's skill in managing a team of project staff who carry out multiple tasks often needing simultaneous attention

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities, PISA Technical Standards: Standard 19.2

Latent	Emerging	Established	Advanced
NPM has no previous management experience	NPM has experience managing a few people sharing common skills and responsibilities	NPM has experience managing a large team or a team composed of individuals with diverse responsibilities and skill sets	NPM has experience in a matrix management structure where project team members belong to different administrative hierarchies

Justification: This is precisely what the Director/NPM currently does.

89. Relevance of NPM expertise

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM's expertise is related to a technical or specialised field, such as data management, analysis, or classroom instruction	NPM's expertise includes specialised knowledge as well as management experience	NPM's expertise includes specialised knowledge, management experience and knowledge of government policy issues and/or international issues

Justification: The NPM has been the Director of DECE for a couple of years and before then worked in data analysis in the same Directorate.

90. NPM's previous experience in planning, organising and conducting large-scale surveys

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM has experience with polling or non-intensive questionnaire-based surveys or experience implementing large-scale survey	NPM has experience with planning some aspects of large-scale assessment surveys (e.g., testing, sampling, data collection)	NPM has experience in several aspects of large-scale surveys, including design and data collection

Justification: The Director of DECE has been in post for a couple of years and before then worked in data analysis in the same Directorate.

91. NPM's knowledge and confidence to represent the country at international meetings where aspects of the project will be discussed

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NPM has sufficient seniority to represent the country's interests	NPM has experience working with different stakeholder groups within country and sufficient seniority to represent country's interests	NPM has sufficient seniority to represent country's interests and knowledge of the interests of different stakeholder groups	NPM has sufficient seniority to represent the country's interests and experience interacting with different sub-national and international stakeholders

Justification: The NPM is well known within Paraguayan stakeholders from the Ministry and out of it. She is also known to LLECE participants, but she does not speak English well.

92. NPM's knowledge of, and the confidence to deal with government agencies, school principals, parents and teachers within their own countries

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM has sufficient seniority to speak with authority on behalf of Ministry or Department	NPM has existing relationships with stakeholders within the education system	

Justification: The NPM was able to put me in contact with several stakeholders including the Minister.

93. NPM knowledge of language of assessments

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: SABER-SA-ILSA: EC3

Latent	Emerging	Established	Advanced
	The national/system co-ordinator or other designated team member is not fluent in the official language(s) of the assessment	The national/system co-ordinator has immediate access designated team members that are fluent in the official language(s) of the assessment	The national/system co-ordinator is fluent in the official language(s) of the assessment

Justification: The official language is Spanish, which is the NPM's mother tongue.

94. NPM's level of oral and written communication skills in English for meetings and communications with the OECD Secretariat and with the International Contractor

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NPM is sufficiently fluent in English to understand general concepts and non-technical issues	NPM is sufficiently fluent in English to understand and take a position on issues presented by OECD Secretariat or International Contractor	NPM is sufficiently fluent in English to argue a specific perspective or position and represent complex or novel issues

Justification: The NPM understands written English, but she does not speak well or write in English.

95. NPM's previous work experience in an education system and experience in educational assessment

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
		NPM is familiar with education system in a professional context	NPM has previous experience working within the education sector

Justification: The NPM has been the Director of DECE for a couple of years and before then worked in data analysis in the same Directorate.

96. NPM's General computing skills (e.g. Microsoft Office suite, WebEx and secure FTPs)

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
Use of computers is primarily for email and internet and basic document reading/reviewing functions	Uses computers for email and internet use as well as producing and editing basic documents and presentations in standard word processors and spreadsheets	In addition to email, and internet, uses formatting conventions, edit/review functions and other shared authorship functions in office software	Uses email, internet and file sharing applications with versioning and complex formatting (e.g., document merges, conversion of file types) and/or works in a secure networked file sharing environment

Justification: The NPM started working at DECE as a data analyst and is competent in all these areas.

97. English proficiency of NPM

Programme output: Identify peer-to-peer learning opportunities regarding PISA participation with other countries and development partners

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NPM has no English proficiency	NPM can limited English fluency (i.e., passive communication with basic productive communication)	NPM has mastery of English as a second language but operates professionally primarily in another language	NPM is fluent or operates professionally in English

Justification: The NPM cannot communicate in English. But she will have another person, competent in English, working side by side with her.

Project Requirement 4. Definition of criteria for stratification of school and student samples

98. Specialised skill for scientific probability sampling

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 9.3, PISA Technical Standards: Standard 16.1, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 1.3, PISA Technical Standards: Standard 1.4, PISA Technical Standards: Standard 1.5

Latent	Emerging	Established	Advanced
Survey design staff have experience with convenience sampling	Survey design staff have experience drawing simple random samples	Survey design staff have experience designing self-weighting or unweighted complex samples (multi-stage clusters and stratification)	Survey design staff have experience designing complex samples with appropriate design weights and/or performed non-response adjustments to analysis weights

Justification: Up to now, the NLSA, SERCE and TERCE have used samples which DECE could manage, but not using weights.

99. Quality of replacement sample

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 1.9

Latent	Emerging	Established	Advanced
There is no replacement sample in the survey design	The replacement sample only allows convenience sampling	The replacement sample is random	The replacement sample provides random assignment of matched replacement(s) for each school

Justification: This is the way DECE draws samples in every large scale assessment they have carried out.

Project Requirement 10. Communication and co-ordination with international contractors for the selection of the student samples in each school

100. Management of linked data files

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 12.1, PISA Technical Standards: Standard 12.5, PISA Technical Standards: Standard 16.2, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 17.5

Latent	Emerging	Established	Advanced
Data processing staff have been given instructions on data management protocols	Data processing staff have experience sorting or extracting data from files with primary keys or unique identifiers	Data processing staff have experience performing data merges using primary and foreign keys	

Justification: DECE has done this for processing their national data and also before sending TERCE data.

101. Data manipulation skill: manipulating data structures

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 12.5, PISA Technical Standards: Standard 16.2, PISA Technical Standards: Standard 17.5, PISA Technical Standards: Standard 12.2, PISA Technical Standards: Standard 17.2

Latent	Emerging	Established	Advanced
	Staff have experience with single format data (e.g., Excel, SPSS) sorting records and adding/computing new variables	Staff have experience with single format data (e.g., Excel, SPSS), experience importing and exporting between proprietary formats using built-in software functions	Staff have experience constructing or parsing proprietary formatted data files and text-based data files with defined formats

Justification: The DECE team have done this, but they require a deeper knowledge of SAS.

102. Data manipulation skill: fluency with statistical software (e.g., SPSS, SAS)

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 12.5, PISA Technical Standards: Standard 16.2, PISA Technical Standards: Standard 17.3, PISA Technical Standards: Standard 17.5, PISA Technical Standards: Standard 17.2, PISA Technical Standards: Standard 12.3

Latent	Emerging	Established	Advanced
There is no data management activity	Data management consists of simple spreadsheets and data entry	Data management is performed mainly using point-and-click menus	Data management is performed using syntax files

Justification: The DECE team prepare syntaxes when doing their own analysis, most of the time in SPSS. They require more skills in SAS.

Project Requirement 14. Establishing a training plan with key staff of the NC to attend training sessions

103. NPM's and NC's Familiarity with PISA skill ontology / framework

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

References: NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NC staff have experience instructing students with a wide range of skill profiles	NC staff have experience developing programs for salient groups of student skills	A common framework is used by NC staff for identifying skill determinants and dependencies for different learning objectives

Justification: The NC has no experience in instructing for abilities.

104. NC's understanding of item response theory

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

References: PISA for Development Document, NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
	NC staff have experience or familiarity with statistics and classical test theory	NC staff have used item response theory in limited context (e.g., scaling dichotomous responses)	NC staff have experience with multiple item response models (e.g., polytomous, Rasch, 2PL, 3PL)

Justification: The DECE team have analysed test items with IRT.

105. NC's test development skills

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

References: PISA for Development Document, NPM Manual: NPM/NC responsibilities

Latent	Emerging	Established	Advanced
NC staff have no experience developing tests or test items	NC staff have experience developing tests or test items using well-defined test specifications	NC staff have used classical test theory to examine item and test difficulty and discrimination/reliability and select appropriate items	NC staff use multivariate statistics to examine test dimensionality, item bias or differential item functioning, and test information and increase the accuracy and relevance of tests

Justification: The DECE team have little experience with multivariate statistics.

Project Requirement 28. Co-ordination of appropriate enhancements/adaptations/translations of instruments, manuals and guides, and field trial and verification process with international contractors

106. Fidelity of administration in local contexts

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 5.1, PISA Technical Standards: Standard 5.2, PISA Technical Standards: Standard 4.4

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have translated data collection protocols	Translators or staff responsible for adaptation have been trained in data collection procedures	Translators or staff responsible for adaptation have participated in data collection	Translators or staff responsible for adaptation have been trained in PISA data collection procedures

Justification: This cannot be classified because DECE has never hired translators.

107. Quality of training for data collection

Programme output: Country capacity in assessment, analysis and use of results for monitoring and improvement

References: PISA Technical Standards: Standard 6.1

Latent	Emerging	Established	Advanced
	Data collection staff have been trained in data collection protocols	Data collection staff have participated in data collection in previous survey or training but received no guidance or feedback regarding the effectiveness or appropriateness of method	Data collection staff have been monitored during previous or mock data collection and have received feedback on their adherence to protocols during previous data collection

Justification: Data collectors change with each assessment, since test administrations depend on raising funds for each opportunity and collectors are hired as needed.

108. Adequacy of translator assessment background

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

References: PISA Technical Standards: Standard 4.2

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have no experience translating or adapting test items	Translators or staff responsible for adaptation have background or experience with education or psychology	Translators or staff responsible for adaptation are experienced teachers	Translators or staff responsible for adaptation are also professional item writers

Justification: This cannot be classified because DECE has never hired translators.

109. Translator knowledge of PISA framework

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

References: PISA Technical Standards: Standard 4.2

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have no experience or knowledge of PISA framework		Translators or staff responsible for adaptation are knowledgeable about the PISA assessment framework	Translators or staff responsible for adaptation can reliably predict the difficulty of PISA test items

Justification: This cannot be classified because DECE has never hired translators.

110. Appropriateness of instrument translation and adaptation to local contexts

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: PISA Technical Standards: Standard 4.3, PISA Technical Standards: Standard 5.1

Latent	Emerging	Established	Advanced
	Translators have limited knowledge of common usage of testing languages	Translators have academic (i.e., foreign) knowledge of testing language usage in local contexts	Translators or staff responsible for adaptation have functional knowledge of dialects or language in different contexts

Justification: This cannot be classified because DECE has never hired translators.

111. Fidelity of instrument translation and adaptation to local contexts

Programme output: Enhanced contextual questionnaires and data-collection instruments

References: PISA Technical Standards: Standard 4.3, PISA Technical Standards: Standard 5.2

Latent	Emerging	Established	Advanced
Translators or staff responsible for adaptation have no experience with research		Translators or staff responsible for instrument adaptation have experience with survey research or experience with questionnaire design	Translators or staff responsible for instrument adaptation are knowledgeable about the constructs measured by PISA questionnaires (e.g., SES, school climate, engagement with learning, etc.)

Justification: This cannot be classified because DECE has never hired translators.

Project Requirement 31. Planning of staffing and resources (technical and material) needed for coding of test booklets and contextual questionnaires and data management

112. Response coding expertise

Programme output: Enhanced cognitive assessments for below-baseline proficiency levels in PISA

References: PISA Technical Standards: Standard 11.1

Latent	Emerging	Established	Advanced
Response coders have no experience with student work	Response coders have experience manually scoring student work	Response coders have experience manually coding student responses in large-scale assessments	Response coders are recalibrated periodically based on results of reliability analysis (see Standard 11.3)

Justification: This is as it was for the writing test in TERCE. However the DECE team have little experience in this activity.

ANNEX B: TERMS OF REFERENCE

This annex includes the introduction and statement of work sections of the OECD Terms of Reference for CNA and CBP.

Introduction

OECD is seeking to enhance its Programme for International Student Assessment (PISA) to make it more relevant for developing countries. Through its PISA for development project, adapted survey instruments will be developed to allow developing countries to assess 15-year-olds' competencies in the key subjects of reading, mathematics and science, while at the same time providing the countries with an opportunity to build their capacity to manage student assessment and apply the result for system improvement .

Statement of Work

These terms of reference (ToR) cover the work to be carried out by three consultants (each hired with the same ToR) as part of the PISA for Development project. The purpose of the work is to ensure that for each of the 6 participating countries,² the following deliverables are completed in a timely and accurate manner in order to support the effective implementing of the project:

- A. Capacity Needs Analysis (CNA) report for each participating country focusing on the institutional and the student assessment areas related to the implementation of the PISA for Development project.
- B. Capacity Building Plan (CBP) prepared for each of the participating countries that are fully costed and directly address the needs identified in the CNA for each country.

In order to produce these two deliverables, the consultants will be required to complete the necessary tasks involved in co-ordination with the project team at the OECD and in-country with each of the participating countries. The tasks associated with each deliverable are described in the following three sub-sections.

Deliverable A: Capacity Needs Analysis reports

In the context of the project's objectives, the roles and responsibilities for National Centres (NC) and National Project Managers (NPM) and the capacity building priorities identified by the countries, the consultants will undertake a Capacity Needs Analysis (CNA) for each of the participating countries.

The benchmark for the CNA will be the necessary capacity required in the context of the PISA for Development project, which is defined as:

- The ability of the individuals and institutions responsible for the project in each country to perform the necessary functions (as set out in the roles and responsibilities for NC and NPM), solve the likely problems that will arise during implementation, and set and achieve project objectives in a sustainable manner.

Countries may desire future capacities for student assessment that go beyond this necessary ability and include competencies in, for example, item development, assessment methods and analysis of assessment data to support policy. In these cases the consultants will reflect the countries' desire in a broader statement of capacity than the one indicated above, but will ensure that these aspirations are rooted in a realistic appraisal of what is possible to achieve in a three year timeframe and given the capacity assets that countries are starting with.

The CNA for each country should be based on existing recent and relevant assessments of capacity for student assessment that may have been undertaken and a clear analysis of desired future capacities (as summarised above) against current capacities. The assessment should also be couched in the broader context of the participating countries' education sector policies, strategies and priorities generally and their strategies for strengthening student assessment in particular. The assessment should generate an understanding of capacity assets and needs, which in turn should lead to the formulation of a Capacity Building Plan (CBP, Deliverable B).

The CNA is integral to the project planning and programming process, as the understanding of capacity assets and needs will serve as key inputs into the formulation of the CBP. The consultants will identify the indicators to be used to measure capacity assets that will serve as a foundation for the subsequent monitoring and evaluation of capacity development. The consultants will develop an overall capacity assessment framework to facilitate the task and this will be composed of three dimensions:

- the enabling environment, particularly the Ministry of Education and other users of the results of the PISA for development project
- organisation, particularly the National Centre and any sub-national institutions that will be involved in the project
- individual, especially the staff of the National Centre and related organisations, in particular the National Project Manager and his/her team.

In undertaking this task the consultants should ensure that at the outset of the activity the capacity assessment objectives and expectations of the country are clarified in the context of the aims and objectives of the PISA for development project and the resources available and that the key stakeholders are identified and engaged throughout the process. In addition, the consultants should adapt the capacity assessment framework to local needs and priorities in each country, in particular the capacity asset indicators that are used. The assessment of existing capacity levels should be transparent and the summarising and interpretation of results should be clearly communicated to key stakeholders prior to the drafting of the capacity assessment report for each country.

In preparing the capacity assessment report for each country, it will be important for the consultants to include the process and methodology adopted the stakeholders (internal/external) that were consulted, their perspectives and insights on the organisation housing the National Centre, a review and analysis of quantitative and qualitative information, and the resulting capacity development priority needs. The results should be reviewed, validated and enhanced through consultation meetings with the main stakeholders in each country and the OECD, prior to finalisation.

Deliverable B: Capacity Building Plans

On the basis of the CNA reports, the consultants should complete and agree with each partner country and OECD a CBP covering the three years of project implementation, taking care to ensure that training and capacity building opportunities are costed and scheduled in a timely and effective way. Specifically,

the consultants are tasked to design a programme that will equip the National Centre, the National Project Manager and other related actors with the capacity INEVAL require to implement the PISA for Development project successfully and, in addition, respond to particular priorities for student assessment that the participating countries identify beyond those necessary for project implementation, such as assessment methods, item development, analysis and use of data to support policy development and student assessment for curriculum reform.

Technical capacity building, institution building and knowledge-transfer opportunities have been clearly identified as part of the implementation of the project with each of the participating countries and development partners. These opportunities include, but are not restricted to, the following:

- procedures for and verification of translations and adaptations of assessment materials (different languages and/or different adaptations of same language versions)
- sample design and selection, including population coverage, exclusions and response rates
- field administration of the assessment and data collection
- quality assurance of the field administration and data collection
- marking and coding of open-ended and multiple-choice items (cognitive and questionnaire responses)
- data entry, cleaning and verification
- scaling of results using IRT models (cognitive and contextual)
- calculation of specific indices (e.g. ESCS gradients)
- calculation, analysis and calibration of item parameters (item difficulty, point-bi-serial indices and other psychometric coefficients for possible data entry errors, translation or other problems)
- compilation of data sets for analysis (student responses and scaled scores)
- exploitation of PISA data sets for analysis (country-specific and international data sets)
- PISA Assessment Frameworks in Mathematics, Reading and Science (basis of the content, competencies and skills assessment)
- item development process (based on PISA frameworks)
- design and drafting of analytical report following PISA country report models
- specific technical topics: plausible variables, IRT models, conditioning, scaling, DIF (Xgender, Xcountry and Xlanguage), student and school weights

In some cases, development partners may establish extended engagement with participating countries for technical assistance to support institutional capacity building and implementation that supports the PISA participation process and the consultants will need to take account of these contributions in the CBP.

The CBP for each country should respond to the needs identified and consist of initiatives and activities that build the foundation for capacity development as well as build momentum for the implementation of the project, the use of the results of student assessment, and the achievement of the desired future capacities in a timely fashion. The CBP should also complement and, where possible, be integrated with the participating countries' broader strategies for student assessment at all levels of their education systems.

The CBP should include indicators to measure progress in the implementation of capacity development over the three years of the project. The programme should have a clear baseline and targets for each year of implementation should be established for each indicator. The process of monitoring progress should also allow the refinement of capacity development response strategies and potentially the design of new initiatives to address evolving needs. The CBP should be accurately costed in the context of the PISA for development international costs budget, the in-country project costs budget of each country, and the additional development partner support that may be available in each country, beyond the project funding.

NOTES

² Participating countries as of May 2015 include: Ecuador, Guatemala, Paraguay, Senegal and Zambia. In addition to these, Cambodia is in the process of finalising a participation agreement with the OECD.

Capacity Needs Analysis: Paraguay

PISA for Development is an initiative of the OECD and its partners that aims to identify how its Programme for International Student Assessment (PISA) can best support evidence-based policy making in emerging and developing economies – and contribute to the UN-led definition of global learning goals for the post-2015 agenda. In addition, the project will help to build country capacity in assessment, analysis and use of results for monitoring and improvement among participating countries. Paraguay is one of six countries participating in the project, and the Ministry of Education and Culture, through the Directorate for Evaluation of Educational Quality (DECE), is responsible for the project in the country. This report presents the results of an analysis of Paraguay in respect of its capacity for managing large scale student assessments, such as PISA.

The results of this report are being used to design a capacity building plan for Paraguay that will be implemented by the OECD, its contractors, the Ministry of Education and Culture, and the Directorate for Evaluation of Educational Quality (DECE), through the PISA for Development project.