PISA FOR DEVELOPMENT

CAPACITY BUILDING PLAN:
PARAGUAY

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CAPACITY BUILDING PLAN FOR PARAGUAY

1. Introduction and background

Since being launched in the year 2000, the Programme for International Student Assessment (PISA) has assessed the skills of 15-year-old students in the areas of reading, mathematics and sciences. The results have provided reliable evidence for the purposes of decision-making in the field of educational policies in member countries of the Organisation for Economic Co-operation and Development (OECD) and, increasingly, in other countries with experience in learning assessment. In conjunction with the World Bank, the OECD has embarked on the PISA for Development (PISA-D) project the aim of which is to facilitate the participation of countries with less assessment experience in a test comparable to the PISA standard, adapted to lower than average achievement in order to provide a more accurate description of levels falling short of that defined as low by the PISA standard.

The initial stage of preparation in each participating country – including Paraguay – was to complete a Capacity Needs Analysis (CNA). For Paraguay, this stage got underway in March 2015 and took until April to complete. The overall benchmark to reach in the CNA is the capacity needed in the context of the PISA-D project, defined as follows:

- 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) Manual, to solve the problems that will arise during implementation and set and achieve project objectives in a sustainable manner.

In the second stage of preparation, PISA-D includes a Capacity Building Plan (CBP) for each participating country which builds on the CNA and is primarily intended to ensure success in participation. Greater capacity for learning assessment and analysis of results will be useful for making decisions founded on evidence and for developing educational goals subsequent to PISA-D. Indeed, training shall be given on all processes. Where possible, capacity building shall be included as part of the project in areas that are of interest to participating countries and are useful to national assessments.

Prior to implementing the project, the World Bank and the OECD hired the services of consultants to determine the capacity building needs of the participating countries and, on the basis of such findings, to develop this CBP and, subsequently, the project implementation plan: the next stage prior to start-up.

The document elaborates the CBP for Paraguay and sets this in the context of the country's education sector and policy priorities. The reference framework used to develop the CNA and the CBP stems from the original version of the PISA requirements set out in the NPM Manual PISA;[1] the NPM Roles and Responsibilities PISA;[2] and the stated programme outputs of PISA-D.[3] The PISA capacity requirements are linked to three dimensions: *1)* enabling environment, *2)* organisation and *3)* individual.

The CBP is geared towards establishing the necessary capacity of participating countries to achieve the five programme outputs of PISA-D, which are:

- Enhanced contextual questionnaires and data collection instruments

- Enhanced descriptive power of cognitive assessments in reading, mathematics and sciences, at appropriate skill levels within the PISA framework

- The development of methodology and analytical framework, for including out-of-school 15-year-olds in PISA

- Increased country capacity in assessment, analysis and use of results for monitoring and improvement

- Engagement with the OECD and other similar countries for developing and identifying learning opportunities to enable them to contribute to the UN-led discussions on the post-2015 education framework goals.

The CNA for Paraguay showed that the country and the Department for Education Quality Assessment (DECE), the NC designated for implementing PISA-D in the country, are well placed to implement PISA. Nonetheless, the analysis also identified the need for capacity building to improve capabilities in each of the three dimensions: enabling environment, organisational capacity and individual skills.

The CBP for Paraguay was prepared between March and April 2015. The plan covers the four years of the project, from 2015 to 2019, and includes the costs of the learning activities relating to the project implementation timescale and the terms of reference for contractors in charge of implementation. PISA-D is technically complex, operatively demanding and statistically advanced. The CBP focuses on the components that make it possible for Paraguay to analyse results and facilitate their use to improve educational policies and the practices of the actors involved in education.

2. Country context

Paraguay stands out among countries owing to the huge volume of clean energy it produces and its massive reserves of fresh water, the largest in the world. Aside from energy, its primary area of production is livestock and soya. Following a huge drop in gross domestic product (GDP) in 2012, the country made a swift recovery with growth of 13.6% in 2013.

According to the World Bank, in 2013 the population of Paraguay stood at a total of 6 082 000 inhabitants. Its GDP is USD 29.01 billion (dollars at the current rate).[4] Moreover, its human development index is 0.61 (2013), making it 111th of the 186 countries in the ranking. Although the country has improved against this indicator since 1988, between 2008 and 2013 Paraguay fell three places in the ranking.[5]

According to the Constitution, Paraguay is a multicultural and bilingual country. In terms of ethnic origins, the population is rather heterogeneous owing to the War of the Triple Alliance that destroyed the bulk of the native population, whereupon the country was repopulated through migration, particularly by Spaniards, Germans and Italians. The indigenous population only accounts for 0.7% of all inhabitants.[6]

Most of the country's population speaks both Spanish and Guarani. The latter is the language of instruction during education for students who use it as their first language or mother tongue, particularly during early grades. Moreover, it is taught as of 7th grade.[7] It is estimated that by the time they reach 3rd grade all students know Spanish, which is spoken by 75% of the population.[8]

The level of corruption is among the highest in Latin America along with Venezuela, with the country holding position 150 of the 175 on the ranking for International Transparency.[9] It has a relatively young

population, a factor that should be taken into consideration when contemplating broadening educational coverage as there will be a greater number of young people at secondary age.

The education system in Paraguay includes nine years of basic education starting at six years of age and is divided into first cycle (1st to 3rd grade), second cycle (4th to 6th grade) and third cycle (7th to 9th). Upon completion of the third cycle, students must choose between following general education to obtain a science baccalaureate or following vocational education to obtain a technical baccalaureate. Both routes are three years long and will prepare students for access to higher education, although vocational education entails more class hours.
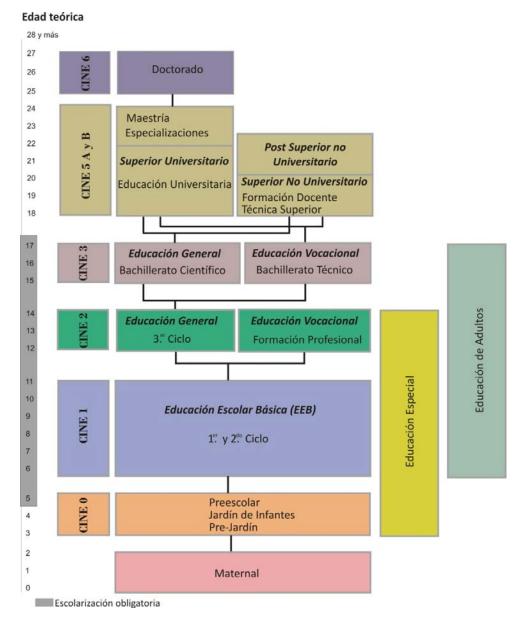
Figure 1. Education system structure in Paraguay

Note: CINE: International Standard Classification of Education (ISCED)

Source: Compiled by MEC – DGPE – Department of education statistics.

Vocational education during the 3rd cycle of basic general education has as its goal to prepare students for specific trades by means of short, subject specific courses, such as hairdressing, tailoring or carpentry. It is necessary to bear in mind that secondary education has only been compulsory since 2010;[10] therefore, it is likely that these courses were focussed on facilitating students with employment opportunities.

By law, schooling is compulsory from pre-school – lasting one year and until 12th grade, the 3rd grade of secondary education – making a total of 12 years of compulsory schooling. However, in practice pre-school education is still optional because it is not guaranteed to be free-of-charge owing to budget restrictions; thus, coverage cannot be made universal across the whole country.

At the end of each cycle, DECE conducts assessments via the National System for Assessing the Education Process (SNEPE).

Paraguay has implemented national assessments since 1996 on an irregular basis depending upon the availability of external funds. In addition, the country has taken part in three regional studies conducted by the Latin American Laboratory for Education Quality Assessment (LLECE) and the International Civic and Citizenship Study (ICCS).

Paraguay took part in two studies that are important to highlight owing to their link with the PISA-D option for assessing out-of-school 15-year-olds.

One is the Literacy Assessment and Monitoring Programme (LAMP), an international study to gauge literacy levels among the population of 15 years and over produced by UNESCO Institute for Statistics (UIS) showing a sample based on a home setting.

The other study was conducted in relation to children in their homes between 2005 and 2008 (the longitudinal study of pre-school efficiency in the first cycle). It was a sample based on an experimental design where pre-school children of five years of age were assessed orally on their reading, vocabulary and their social and emotional development. It was conducted at the start and the end of the school year.[11]

Over the past ten years, the following national assessments have been conducted:

2004: communication, mathematics and the natural environment/natural sciences for 3rd and 6th grade of basic education.

2006: Spanish language and literature, mathematics and basic sciences during the 2nd year of secondary education.

2010: communication and mathematics for 3rd, 6th and 9th grade of basic education (end of 1st, 2nd and 3rd cycle).

DECE has a small, albeit well-trained and disciplined team of less than 20 individuals who are focussed on their task. Even so, to take part in PISA-D and benefit from the plan, they will also need to address major challenges, strengthening staff by securing more recruits, overcoming the shortcomings in English and progressing with analysis methodologies in order to ensure wider use and dissemination of results.

By securing finances from the Fund for Excellence in Education and Research (FONACIDE) – funded by Itaipú – for the PISA-D project, sufficient resources have been secured in order to improve and strengthen the National Assessment Centre and subsequently set up a National Institute for Education Assessment in Paraguay (INEEP). Accordingly, along with the launch of PISA-D in Paraguay, a process of

fresh recruitment got underway following the allocation of resources. It is expected that DECE team will become 50% larger at least by 2016. However, it is important to ensure communications staff are sufficient in numbers in particular.

The education system in Paraguay is highly centralised. Indeed, the recruitment of teachers for any post is made by the Ministry through an invitation to tender.

Institutions are managed according to the following classification groups:

- Official sector: an education institution organised and administered by the State of Paraguay (Ministry of Education and Culture, governments, towns, binational institutes) which is entirely funded by the Ministry.

- Private sector: an education institution organised and administered by a non-State body. Such institutions are funded by parents or trustees.

- Private subsidised sector: a privately managed institution that receives some degree of State support, such as the recruitment of one or more teachers or a budgetary contribution. This is covered by the Ministry of Education and Culture thanks to management by the Directorate-General for Education Planning and the Department for Education Statistics (Statistical Yearbook for 2010 (MEC-DGPE)).

The percentage of overage students is high. In 2011 in 1st and 2nd cycle the number was 16% and in the 3rd cycle it was 17.2 (MEC-DGPE, SIEC 2012). This demonstrates the importance of considering a sample of 15-year-old students in primary education and may indicate that 15-year-old students may be found in the 3rd cycle and secondary education.

Table 1. Percentage of over aged students per cycle, 2012

Education level	Percentage of over aged students
Pre-school	15.7
1st and 2nd cycle	16
3rd cycle	17.2
Secondary education	16.9

Source: MEC-DGPE, SIEC 2012.

Table 2. Distribution of 15-year-old students according to their cycle of study in 2010

Education level	Numbers	Percentages
Pre-primary	0	----
Basic 1st and 2nd cycle education	3 865	3.8
Basic 3rd cycle	50 190	49.6
Secondary education	47 186	46.6
Total	101 241	100

Source: MEC-DGPE, SIEC 2012.

The rates for school coverage also point to the need to consider out-of-school 15-year-olds. In both the 3rd cycle and secondary education, the rates of coverage are just above 60%, meaning that at least a third of the population at the appropriate age to be following these levels (including 15 year-olds) is assumed to be not studying.

Table 3. Net coverage rate adjusted according to education levels

Education level	2000	2011
Pre-primary	31.34	34.59
Basic 1st and 2nd cycle education	97.86	82.62
Basic 3rd cycle	47.04	61.46
Secondary education	56.39	63.76

Note: This table represents the net rate for pre-primary education.

Source: http://data.uis.unesco.org/#.

Nonetheless, UNESCO statistics suggest only 14.8% of young people who should be following third cycle are out-of-school.

3. Summary of capacity building needs

It is important to point out that DECE has an adequate organisation and experience to take part in PISA-D successfully, but it needs to guarantee the staff increases it currently seeks.

The report on capacity building needs shows organisational aspects followed by those relating to the enabling environment are the areas with the greatest number of elements classified as falling below established levels. One major need to be addressed is the lack of staff with a command in English, which would pose difficulties for taking part in PISA-D, along with capacity building needed using bibliographies which are drafted in said language to a large extent.

All areas relating to item preparation and the preparation of reports on results are clearly identified within the elements for which greater capacity is needed.

3.1. Capacity to improve contextual questionnaires and implement them

DECE has experience in implementing and analysing questionnaires as national assessments are accompanied by instruments addressed to heads, teachers, students, parents and individuals in charge. Nonetheless, it would be important for capacity building to be given in terms of the conditions which must be met by those instruments and the methodologies applicable in order to validate them.

3.2. Capacity to improve cognitive assessment instruments

Shortcomings were identified in procedures for item preparation and this process was one of the two for which greater capacity building was sought. It is pertinent to note that DECE has experience in preparing multiple-choice items for language and mathematics, but not for sciences or indeed in open questions. This may lead to difficulties in respect of PISA-D when reviewing and adapting items.

In Paraguay, tests are prepared based on levels of achievement described according to skills. Nonetheless, records are not drawn up on how the descriptions of those levels of achievement linked to scores are prepared. In addition, the question is raised as to whether the cut-off points will need to be changed for the test to be carried out in 2015 since no changes were sought in the descriptions. For this reason, it is expected that DECE would benefit greatly from taking part in the development of descriptions for lower PISA levels. It is of particular interest for DECE to learn how to assess and develop items, the goal of which is to gauge life skills for specific, actual situations.

3.3. Capacities to assess out-of-school 15-year-olds

DECE has experience in assessing populations at home with specific characteristics (LAMP and the longitudinal study of pre-school efficiency). Although this is an advantage, the difficulty lies in establishing where the out-of-school 15-year-olds are, as the census for 2012 has yet to draw to a conclusion and projections from the previous census (2002) are highly problematic.

3.4. Capacities in assessment, analysis and use of results

The reports published by DECE are simple and basically descriptive. No further analyses with greater detail or accuracy are carried out using the results. There is a stated need for DECE to improve analyses to produce more effective reports for the various audiences.

4. Methodology

The CNA made it possible to classify capacity training needs into two types: those needed to implement PISA and those needed for national assessments. These are each in turn classified into a range of categories as set forth below.

For implementation of PISA, the categories are:

- Capacity building elements for developing the commitment of stakeholders

- Capacity building elements for gaining an acquaintance of progress with new quality procedures and those established for the implementation of PISA-D

- Progress area for sampling of schools, students and out-of-school young people

- Development area for products, communication and dissemination.

Capacities for improving PISA and national assessments are classified into:

- Development area for improving infrastructure

- Development area for psychometric methods

- Development area for preparation and storage of items

- Development area for research methodologies.

In order to determine the aforementioned capacity building needs, the 112 required conditions from the CNA framework were classified into four categories according to their current status: "Latent", "Emerging", "Established" and "Advanced". For each of them there is a rubric that describes the status of those conditions. The final two categories, "Established" and "Advanced", constitute the level needed for effective implementation of PISA-D. In the case of each requirement that did not make it into the "Advanced" category, these were assigned a target to be reached.

By using the http://www.polymetrika.org/PISAD tool, a general and an annual capacity building goal was assigned to each needs area for the four years of the project.

For the areas stated, the pertinent capacity building plans were designed envisaging eight international/NPM meetings for PISA-D, meetings and workshops arranged in Spanish for Latin American countries and capacity building exclusively in English for DECE.

Next, in the pertinent places in the CBP tool, information was entered on capacity building and activities were established for each year according to the timeframe for PISA-D, starting with the eight international meetings for NPMs and the International Advisory Group (IAG) which had already been set. The following aspects were detailed for each activity: a description, the documents to be attached, the required reports, the responsibility of the country, administrative details, relevant documents and their cost. The cost can be broken down into international and national dimensions. In the case of the latter, it is possible to determine the amount that needs to be covered by a loan or contributions from other countries. No international costs were identified as expenses of this type will be covered by the project. Most national costs are expenses for attending meetings: travel and allowances. It is important to recall that, along with other DECE projects, PISA-D in Paraguay is entirely funded by the Fund for Excellence in Education.

The work on the CBP was conducted in conjunction with DECE director between 20 and 31 April 2015 as part of the second mission with the consultant. Once the information had been entered into the online tool (http://www.polymetrika.org/PISAD), the director discussed the summary with her team and requested the individual in charge of management to budget the activities.

In order to calculate the budget it was necessary to determine who would attend the capacity building sessions. As a significant number of officials with a command of English will be recruited soon, the specific individuals who will take part have not yet been determined; only the positions they will occupy.

5. Results of the analysis based on the capacity building reference framework

The CBP was drawn up for the four-year PISA-D cycle (2015-2019). As stated, the preparation of this plan co-ordinated the capacity building needs with the eight international meetings that had previously been programmed and the PISA-D schedule that had been updated in January 2015. The costs of the programme were determined according to information provided by DECE.

This plan includes two capacity building aspects that Paraguay is in the process of requesting based on securing the funds needed to strengthen those areas with the greatest need for capacity building: psychometric analysis and item development, both aspects requested in Spanish jointly with other Latin American countries, in particular, Ecuador, Guatemala and Honduras.

A workshop on item preparation is proposed for the two stages so teams can apply what they have learnt in their countries with full teams for both sessions. Subsequently, these items shall be commented on and feedback given.

Certain international activities will meet several goals and, by extension, will serve several capacity building areas. When this is the case, the meeting is included in the most pertinent area and footnotes are detailed to indicate other purposes. Accordingly, the costs are not doubled and costless activities do not appear. The table below details the international meetings proposed with the capacity building areas to which they contribute along with the participants envisaged in the costs and their characteristics.

Table 4. International meetings with the capacity building areas proposed and envisaged attendees

NPM meeting (date and topics to address)	Capacity building area	Position and/or speciality
September 2015, 1st meeting PISA-D contextual and cognitive reference frameworks Contextual and cognitive items Characteristics of the bank of items available Capacity building for preparation of items	5.1.2 New and established quality procedures for implementing PISA-D 5.2.3 Item storage and preparation	NPM National co-ordinator Specialist in languages Specialist in sciences Specialist in mathematics Specialist in contextual questionnaires Co-ordinator for measurement and analysis
January 2016, 2nd meeting Capacity building for adaptation, translation and verification of all study materials Sampling	5.1.2 Capacity building elements for progress with new and established quality procedures for implementing PISA-D 5.1.3 Progress area for sampling of schools, students and out-of-school young people. 5.2.3 Development area for preparation and storage of items.	NPM National co-ordinator Specialist in languages Specialist in sciences Specialist in mathematics Specialist in contextual questionnaires Co-ordinator for measurement and analysis Specialist in data processing
April 2016, 3rd meeting Sampling of students Field operations Applicator training	5.1.2 Capacity building elements for progress with new and established quality procedures for implementing PISA-D	NPM National co-ordinator Specialist in data processing. Field co-ordinators Co-ordinator of operations/logistics
July 2016, 4th meeting Field operations Contextual and cognitive coder training Data handling	5.1.2 Capacity building elements for progress with new and established quality procedures for implementing PISA-D	NPM National co-ordinator Specialist in languages Specialist in sciences Specialist in mathematics Specialist in contextual questionnaires Co-ordinator for measurement and analysis Specialist in data processing Co-ordinator of operations/logistics
May 2017, 5th meeting Analysis and interpretation of pilot results Analysis plan for contextual questionnaires Preparation for definitive application and sampling	5.1.2 Capacity building elements for progress with new and established quality procedures for implementing PISA-D 5.1.4 Development area for products, communication and dissemination. 5.2.2 Development area for psychometric methods 5.2.3 Development area for preparation and storage of items	NPM National co-ordinator Specialist in languages Specialist in sciences Specialist in mathematics Specialist in contextual questionnaires Co-ordinator for measurement and analysis Specialist in data processing
July 2017, 6th meeting Field operations for final application Sampling of definitive application Applicator training Correction of open questions and data handling	5.1.2 Capacity building elements for progress with new and established quality procedures for implementing PISA-D 5.1.3 Progress area for sampling of schools, students and out-of-school young people	NPM National co-ordinator Specialist in languages Specialist in sciences Specialist in mathematics Specialist in contextual questionnaires Specialist in data processing Co-ordinator of operations/logistics

Table 4. International meetings with the capacity building areas proposed and envisaged attendees (continued)

NPM meeting (date and topics to address)	Capacity building area	Position and/or speciality
March 2018, 7th meeting Summary of procedures for data processing Scaling methodology Data analysis Mediation of reports for various audiences	5.1.4 Development area for products, communication and dissemination	NPM National co-ordinator Specialist in languages Specialist in sciences Specialist in mathematics Specialist in contextual questionnaires Co-ordinator for measurement and analysis Specialist in data processing Researcher
July 2018, 8th meeting Part 1: Scaling, analysis and interpretation of definitive test results Preparation for reporting and disseminating results Part 2: Plans for the national report	5.1.4 Development area for products, communication and dissemination	NPM National co-ordinator Social communicator Specialist in contextual questionnaires Specialist in data processing Researcher

5.1. Capacity building for PISA-D implementation

5.1.1. Capacity building element: Product development, communication and dissemination

Ultimate goal for this capacity building element:

- To establish a medium term schedule of assessments with ensured funds. DECE expects that this will happen when there is an autonomous Institute.

Assessment of capacity building needs:

Capacity building need	Current classification	Description
Clear statement of purpose for participation in NLSA	Emerging	There is an informal or draft policy document that authorises the NLSA.
Use of ILSA	Advanced	Results from the ILSA are used in a variety of ways to inform decision-making in the country/system.
Stability of NLSA program	Established	The NLSA is a stable program that has been operating regularly.
Having regular funding for NLSA	Established	There is regular funding allocated to the NLSA. Now they will create INEEP with funds from FONACIDE and the mechanisms for having a regular funding.
Adequacy of NLSA funding	Established	Funding covers all NLSA core activities. Once they get the funds, DECE considers budgeting for all requirements.
Dissemination of ILSA results	Advanced	Country/system specific results and information are regularly and widely disseminated in the country/system.
Feedback from ILSA	Advanced	Products to provide feedback to schools and educators about ILSA are systematically made available. After each result release DECE goes to every sampled school to inform test results.
Local capacity building for ILSA	Advanced	The country/system offers a wide range of opportunities to learn about ILSA.
Providing teachers with opportunities to learn about the NLSA	Advanced	There are widely available high quality courses or workshops on the NLSA offered on a regular basis.
Bureaucratic efficiency	Advanced	Communication channels allow direct institutional access between NC and stakeholders. The Minister of Education is processing an organisational change to solve this problem.
Efficiency of communication protocols	Advanced	The NPM can engage directly stakeholders but in a formal or subordinate role (i.e., with restricted exchange of communication).
Communication with stakeholders	Advanced	The NC has regular meetings or accessible forums with stakeholders for two-way discussions.
NLSA research and development funding	Advanced	Funding covers research and development activities.
Having strong organisational structures for NLSA	Advanced	The NLSA office is an independently funded and operating agency, institution or unit.
Positive washback of ILSA	Advanced	Decisions based on the ILSA results have had a positive impact on students' achievement levels.
NPM regularity of communication	Advanced	NPM can process all incoming email and voicemail each day.

Year 1 goal (2015-2016): Program and schedule the different meetings with the Technical Advisory Committee and the Funding Administrative Council

Activity	Involve the Funding Administrative Council in doing the required lobby for pushing towards the consolidation of the Institute.
International costs	0
In-country costs	No costs
Expected additional funding	0

Total cost Year 1: USD 0

Year 2 goal (2016-2017): Consolidate a more diverse (including teachers and policy makers), permanent and regular advisory committee

Activity	Participate and have a saying in regard to legal and administrative decisions for the creation of the Institute. Inform the Funding Administrative Council about progresses and delays in these tasks and ask their help for getting things through.
Country responsibilities	Follow up the political discussions, inform policy makers and keep things moving forward.
International costs	0
In-country costs	0
Expected additional funding	0

Total cost Year 2: USD 0

Year 3 goal (2017-2018): Have a settled building, structure and staff of the National Assessment System

Activity 1	Assess the legal documents that create and regulate the Institute so as to suggest improvements.
Deliverables:	Report of that study.
Country responsibilities	Work in the team the main conclusions (benefits and difficulties) of the Institute experience.
Relevant documentation	Regulations. Changes proposed.
International costs	0
In-country costs	0
Expected additional funding	0
Activity 2	IAG Meeting March 2018. Senegal
Reporting requirements	Meeting report to the Ministry. Report expenses to Administration and Finance.
Country responsibilities	Attend to the meeting. Read the materials sent beforehand. Meeting report. Share with the team what has been learnt.
Administrative details	Approval for travelling Passport Tickets.
International costs	0
In-country costs	USD 10 490
Expected additional funding	0

Total cost Year 3: USD 10 490

Summary: Total capacity-building element cost: USD 10 490

5.1.2. Capacity building element: Upgrading existing and new quality procedures for PISA implementation

Ultimate goal for this capacity building element:

- Have specialised staff for carrying out every test administration and increase the number of people for analysis and for test development.

Assessment of capacity building elements:

Capacity building need	Current classification	Description
Geography and climate obstacles	Established	Quality of transportation networks limits the ability to reach certain regions under certain weather conditions.
Security issues with data collection	Advanced	All regions are accessible.
Funding for NPM/NC for international training and meetings	Advanced	Dedicated funds are available for participation in international training and meetings.
Relevance of NC expertise	Advanced	The NLSA office is adequately staffed to carry out the NLSA effectively, with no issues.
Experience in planning, organising and conducting large scale surveys	Advanced	NPM has experience in several aspects of large-scale surveys, including design and data collection.
Adequacy of ILSA funding	Established	The funding is by projects. So once they get the money they can develop every activity. But they cannot plan in advance for future projects.
National co-ordinator for ILSA	Established	There is a team and national/system co-ordinator to carry out the ILSA activities.
Effectiveness of human resources for ILSA	Advanced	The ILSA office is adequately staffed and trained to carry out the ILSA effectively, with no issues.
Contributions to ILSA	Advanced	The country/system has contributed new knowledge on ILSA.
Quality of training for data collection	Advanced	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.
Avoidance of conflicting interests	Advanced	Employment framework require data collectors to disclose any potential conflict of interest.
Scheduling priority given to ILSA activities	Established	NC staff manage their own schedules and may reschedule ad hoc meeting requests.
Availability of NPM/NC for international training and meetings	Advanced	Time is specifically allocated to participation in and preparation for international activities.
Accountability for security	Advanced	Where uncontrolled access is possible, legally binding confidentiality agreements enforce the data access restrictions and apply to all staff.
Data quality of ILSA	Established	The country/system met all technical standards required to have its data presented in the main displays of the international report.
Sufficiency of data collection staff	Advanced	There is a sufficient number of qualified data collectors for all sites.
Effectiveness of training for data collection	Advanced	Training for data collection is conducted in group settings with feedback between trainees.
Adherence to protocol	Advanced	Data processing staff have experience operating with a variety of protocols in different contexts.
Availability of NPM	Advanced	Sufficient person time is allocated to PISA with at least one full time (non-clerical) NC staff member.
NPM's skill in managing a team of project staff who carry out multiple tasks often needing simultaneous attention	Advanced	NPM has experience in a matrix management structure where project team members belong to different administrative hierarchies.
Relevance of NPM expertise	Advanced	NPM's expertise includes specialised knowledge, management experience and knowledge of government policy issues and/or international issues.
NPM's level of oral and written communication skills in English for meetings and communications with the OECD Secretariat and with the International Contractor	Established	NPM is sufficiently fluent in English to understand and take a position on issues presented by OECD Secretariat or International Contractor.
NPM's previous work experience in an education system and experience in educational assessment	Advanced	NPM has experience in several aspects of large-scale surveys, including design and data collection.

Capacity building need	Current classification	Description
NPM's General computing skills (e.g., Microsoft Office suite, WebEx and secure FTPs)	Advanced	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.
Quality of document proofing	Advanced	Clear protocols exist for the identification of potential typographic errors and/or the NC has an official dictionary and manual of style.
Response coding expertise	Advanced	Response coders are recalibrated periodically based on results of reliability analysis (see Standard 11.3).
Fidelity of response coding	Established	The operations manual is used directly in training for and management of coding activities.
Correct sequencing of administration of national options	Advanced	Final administration protocols are/will be sequentially scripted and bound and provided with the international testing materials.
Engagement of clerical/administrative support	Advanced	Clerical support is the initial point of contact and/or has access to all incoming and outgoing correspondence.
National Centre co-ordination	Established	Staff meetings are scheduled and attended regularly.
Participation in previous international ILSA training	Established	The ILSA team attended all international workshops or meetings.
Secure storage of completed materials following data collection	Advanced	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).
Adherence to security protocols	Advanced	All staff receive training in security protocols.
Security auditing	Latent	No tracking is made of access to secure materials.
Availability and quality of publishing resources	Advanced	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.
Monitoring of collection procedures	Advanced	Monitored sites are randomly sampled and the rationale for any exclusion from site monitoring is agreed upon prior to sampling.
Data collection monitoring	Advanced	All monitors are trained as data collectors.
Adequacy of transportation for data collectors	Established	Data collectors use personal vehicles with reimbursement.
Commitment of data collectors to training	Advanced	Training time is compensated and is integrated with regular duties (or staff are hired exclusively for data collection).

Year 1 goal (2015-2016): Get acquainted with the whole PISA-D project, understand and know how to use the frameworks for the cognitive and contextual instruments

Activity 1	IAG meeting, 2015, Paris.
Reporting requirements	Meeting report to the Ministry. Report expenses to Administration and Finance. Register and booking of country participants.
Country responsibilities	Attend to the meeting. Read the materials sent beforehand. Meeting report.
Administrative details	Approval for travelling Passport Tickets.
International costs	0
In-country costs	USD 11 732
Expected additional funding	0
Activity 2	IAG meeting, 2016, Paraguay.
Deliverables	Meeting report to the Ministry. Report expenses to Administration and Finance.
Reporting requirements	Approval for travelling Passport Tickets.
Country	Organise and host the meeting. Attend to the meeting. Read the materials sent beforehand.

responsibilities	Meeting report.
Administrative details	Venue and coffee breaks Transport for the participants Media player Financing and administrative arrangement for simultaneous translation.
International costs	0
In-country costs	USD 3 922
Expected additional funding	0
Activity 3	DECE will make an agreement with the USA embassy to get English classes for signalled members of its staff. This will be given in their place of work. This course should be permanent through the whole project with classes at least twice a week.
Deliverables	English text book. Hands out or notes.
Reporting requirements	Assessment of what has and should have been learned.
Country responsibilities	Organise the course and specify the objectives. Allow people to assist. Facilities for carrying on the classes.
Relevant documentation	English text book.
International costs	0
In-country costs	To be confirmed
Expected additional funding	0
Activity 4	September, 2015, Ecuador. First NPM 4-5 day meeting: Contractor holds international meeting on existing PISA cognitive and contextual assessment frameworks, characteristics of the available item pools, and capacity building around item development, including training and peer-to-peer learning activities.
Deliverables	Frameworks in Spanish. Tables of Specification used in the last regular PISA and/or ToS to be used in PISA-D. Presentations and hands out. Table of specification guidelines. Item writing guidelines.
Reporting requirements	Frameworks in Spanish. Table of specification guidelines. Item writing guidelines.
Country responsibilities	Before assisting: Reading documents previously sent. Discussing those documents with the whole team so that the person that assists asks everybody's questions. After the meeting: Reproduce the workshops to their teams. Fulfil the tasks assigned for the period in between meetings. Commitment to fulfil and exchange the tasks and works required by the contractor.
Administrative details	Official authorisation for leaving the country. Process tickets, Visas and travelling insurance.
Relevant documentation	Frameworks in Spanish. Table of specification guidelines. Item writing guidelines.
International costs	0
In-country costs	USD 14 352
Expected additional funding	0

Total cost Year 1: USD 30 006

Year 2 goal (2016-2017): Learning to prepare and administer survey material and sampling for field trial

Activity 1	January 2016, Washington. Second NPM 4-5 day meeting: Contractor conducts international meeting on capacity building around adaptation, translation and verification of all survey materials and sampling.
Deliverables	Guidelines for item development. Guidelines for item adaptation. Forms for recording the items to be developed. Forms to include desired adaptations and contractor's answers. Hands out. Presentations.
Reporting requirements	Countries submit some items. Contractor gives feedback on them. Approved adaptations. Reasons for rejecting those that were not approved.
Country responsibilities	Reading documents previously sent. Discussing those documents with the whole team so that the person/s that assists asks everybody's questions. Reproduce the workshops to their teams. Fulfil the tasks assigned for the period in between meetings.
Administrative details	Process tickets, Visa, per diem, insurances, authorisation.
Relevant documentation	Guidelines for item development. Guidelines for item adaptation.
International costs	0

In-country costs	USD 35 640
Expected additional funding	0
Activity 2	July 2016, Zambia. Fourth NPM 4-5 day meeting: Contractor conducts international meeting on capacity building around field test survey operations, scoring and coder training, and data management. Final preparation for field trial test administration and for data processing after it.
Deliverables	Coding manuals and Marking guides. Examples of coded open ended answers. Data management manual in Spanish. Software to be used. Presentations. Hands on.
Reporting requirements	File with data entered and clean. Report of inconsistencies found and checked. The international contractor may establish other.
Country responsibilities	The data manager assists to the meeting and prepares for it. Takes his own laptop. Nominate the persons that will assist. Assistants prepare for the meeting by reviewing the marking guides within the team and collect questions and doubts.
Administrative details	Tickets, Visas, per diems and authorisations.
Relevant documentation	Coding manuals, Marking guides and data management manual in Spanish.
International costs	0
In-country costs	USD 41 913
Expected additional funding	0
Activity 3	Peer-to-peer learning, March 2016, Chile: quality control process for test administration. Three days visit and five days for distant work. Review records and qualify. Improve the quality control plan and interpret the causes of main problems.
Deliverables	Recording forms Quality indicators Definition of indicators Report on quality of FT administration Improved quality control plan, with indicators, definitions and recording forms.
Reporting requirements	Records kept.
Country responsibilities	Have all manuals available. Operation staff having read the manuals.
Administrative details	Hotel and tickets booking and payment.
Relevant documentation	
International costs	0
In-country costs	USD 2 225
Expected additional funding	0
Activity 4	DECE will make an agreement with the USA embassy to get English classes for signalled members of its staff. This will be given in their place of work. This course should be permanent through the whole project with classes at least twice a week. Activity continued from the previous year at a higher level. Costs are not possible to determine yet, since they are looking for different alternatives.
Deliverables	English text book. Hands out or notes.
Reporting requirements	Assessment of what has and should have been learned.
Country responsibilities	Organise the course and specify the objectives. Allow people to assist. Facilities for carrying on the classes.
Relevant documentation	English textbook.
International costs	0
In-country costs	0
Expected additional funding	0
Activity 5	April 2016, Paraguay. Third NPM 4-5 day meeting: In liaison with the Contractors for Strand B and Strand C, Contractor holds international meeting on student sampling, FT survey operations, test administrator training.
Deliverables	Operation Manual, NPM manuals, Test administrator Manual, School Co-ordinator Manual, Quality control manual, School tracking forms, Student tracking forms.
Reporting requirements	Summarise the challenges that the country will need to face and the ways in which the NC may surmount them. Describe the adaptations required in the country compared to the established PISA procedures.
Country	Reading documents previously sent. Discussing those documents with the whole team so that

responsibilities	the person/s that assists asks everybody's questions. After the meeting, reproduce the workshops to their teams.
Administrative details	Register and booking of country participants.
Relevant documentation	Manuals and forms.
International costs	0
In-country costs	USD 3 922
Expected additional funding	0
Activity 6	Peer-to-peer learning (Chile) In quality control test administration. One week visit and two weeks distant work. Design the plan and design the forms for keeping the records.
Deliverables	Improved quality control plan, with indicators, definitions and recording forms. Recording forms Quality indicators Definition of indicators.
Reporting requirements	Records kept
Country responsibilities	Have records available. Have all manuals available. Operation staff having read the manuals.
Administrative details	Hotel and tickets booking and payment. Tickets, hotel booking and payment for the Mentor.
International costs	0
In-country costs	USD 2 225
Expected additional funding	0

Total cost Year 2: USD 85 925

Year 3 goal (2017-2018): Learn to analyse and use field trial results to improve main study instruments. Be prepared for main study test administration and data processing.

Activity 1	IAG meeting, Zambia, March 2017.
Reporting requirements	Meeting report to the Ministry. Report expenses to Administration and Finance.
Country responsibilities	Attend to the meeting. Read the materials sent beforehand. Meeting report. Share with the team what has been learnt.
Administrative details	Approval for travelling Passport Tickets.
International costs	0
In-country costs	USD 9 404
Expected additional funding	0
Activity 2	DECE will make an agreement with the USA embassy to get English classes for signalled members of its staff. This will be given in their place of work. This course should be permanent through the whole project with classes at least twice a week. Continued activity at a higher level.
Deliverables	English text book. Hands out and note.
Reporting requirements	Assessment of what has and should have been learned.
Country responsibilities	Organise the course and specify the objectives. Allow people to assist. Facilities for carrying on the classes.
Relevant documentation	English text book.
International costs	0
In-country costs	To be confirmed.
Expected additional funding	0
Activity 3	May 2017, Washington or Senegal. Fifth NPM 4-5 day meeting: In liaison with the Contractors for Strands B and C, Contractor holds international meeting on analysis and interpretation of FT results, and preparation for MS including sampling and proposed draft MS instruments.
Deliverables	Document on general knowledge of IRT. Almanacs with item data. Rules and standards for discarding or retaining items. Presentations and hand out on general knowledge about IRT. Options of software to analyse items, manuals for using them and procedures in Spanish Software manuals.
Reporting	Fulfil tasks assigned for periods in between meetings.

requirements	
Country responsibilities	Fulfil tasks assigned for periods in between meetings. Official authorisation for leaving the country Process tickets, Visas, per diem and travelling insurance.
Administrative details	Official authorisation for leaving the country Process tickets, Visas, per diem and travelling insurance.
Relevant documentation	Rules and standards for discarding or retaining items.
International costs	0
In-country costs	USD 38 254
Expected additional funding	0
Activity 4	July 2017, Guatemala. Sixth NPM 4-5 day meeting: Contractor conducts international meetings on capacity building around MS survey operations, MS student sampling, test administrator training, scoring and data management. COSTED IN 5. School, student and out of school sampling.
Deliverables	Survey operation manual and forms to be used by test administrators. Test Administrator Manual. School Co-ordination Manual. Marking guides. Coding manuals. Examples from the field trial. Data management manual for the main study in Spanish. Software for MS data entry. VERY IMPORTANT that contractor gives feedback and suggestions for improvement after the field trial as well as after final test administration. Main problems encountered during the field trial, from the country's perspective and from the contractor's point of view. Ways to overcome those difficulties.
Country responsibilities	Reports for every process that affect test administration: printing, packing, delivering, Student Tracking Forms, labelling, test administrator performance, incidents during test administration, school and student participation, test material recovery, etc. Be prepared for the meeting. Prepare for the meeting by reviewing the marking guides and the report of difficulties for the trial test.
Administrative details	Tickets, Visas, per diems, authorisation and insurances.
Relevant documentation	Survey operation manual and forms to be used by test administrators. Test Administrator Manual. School Co-ordination Manual. Marking guides. Coding manuals.
International costs	0
In-country costs	0
Expected additional funding	0

Total cost Year 3: USD 47 658

Summary: Total capacity-building element cost: USD 163 589

5.1.3. Capacity building element: Stakeholder engagement

Ultimate goal for this capacity element:

- Develop a real evaluation culture that stimulates people's demands for valid independent assessments. Stakeholders are active helping DECE's dissemination.

Assessment of capacity building elements:

Capacity building need	Current classification	Description
Transparent policy for NLSA	Established	The policy document is available to the public.
Clear statement of purpose for participation in ILSA	Established	There is a formal policy document that addresses participation in ILSA.
Expectations for NLSA	Advanced	There is a written NLSA plan for the coming years.
Having strong public engagement for NLSA	Advanced	All stakeholder groups support the NLSA.
Setting clear policies for ILSA	Established	The policy document is available to the public.
Effect of political climate on implementation	Advanced	All relevant political bodies (government and opposition) actively support the project.
Stakeholder use of LSA data	Advanced	Stakeholders actively analyse data for specific information.
Autonomy of NLSA structures	Advanced	Political considerations never hamper technical considerations.
Accountability of LSA structures	Established	The NLSA office is accountable to a clearly recognised body.
Breadth of stakeholder engagement	Advanced	Multiple stakeholders are engaged including non-government or indirect educational stakeholders.
Engagement of data collection agency or network with collection sites (e.g., schools)	Advanced	The NC has regular contact with schools through professional development and/or previous LSA activities.
NPM's knowledge and confidence to represent the country at international meetings where aspects of the project will be discussed	Advanced	NPM has sufficient seniority to represent the country's interests and experience interacting with different sub-national and international stakeholders.
NPM's knowledge of, and the confidence to deal with government agencies, school principals, parents and teachers within their own countries	Established	NPM has existing relationships with stakeholders within the education system.
Perceptions of external survey-based large-scale assessment (LSA) of lower-level stakeholders	Emerging	Stakeholders understand LSA is not antagonistic but see it as an unnecessary disruption.
Scheduling conflicts due to local political activities	Advanced	Scheduled political or civic activities do not adversely affect the project.

Year 1 goal (2015-2016): Involve the Funding Administrative Council and Advisory Technical Group PISA dissemination

Activity	Create and organise a Technical Advisory Group and make them follow step by step all what is happening and will happen. Prepare regular each three months meetings with these reports and receive feedback in regard to what are their people thinking. In the first year (2015) there will be two meetings. This group will be constituted by Universities, Unions, Students, teacher, ONGs, International Aid Institution, Educational researches, parents associations, representative of the Funding Council.
Deliverables	Hands out. Presentations.
Reporting requirements	Keep records of every meeting.
Country responsibilities	Organise the meetings, prepare the agenda and presentations.
Administrative details	Venue Coffee break Media player Materials.
International costs	0
In-country costs	USD 118
Expected additional funding	0

Total cost Year 1: USD 118

Year 2 goal (2016-2017): Develop the plan for analysing PISA results with the opinion of different stakeholders

Activity	Start the design of a plan of analysis for reporting PISA with the assistance of both committees. This will be discussed in the regular meetings with them. The implementation and draft results of this plan will be followed through the whole meeting. Confidentiality will be an issue to consider.
Deliverables	In regard to this topic no printed material will be distributed.
Country responsibilities	Present to the Committees possible analysis with PISA data. Ask and systematise their opinion in regard to main educational problems that should be addressed through analysis. Organise the agendas and presentations for these meetings. Invite participants and ensure the maximum of attendance. Keep records of the meetings.
Administrative details	Costs of these activities are considered in previous activities for the technical committee and the funding administration council does not have any cost.
International costs	0
In-country costs	USD 235
Expected additional funding	0

Total cost Year 2: USD 235

Year 3 goal (2017-2018): Request some key stakeholders to comment and make suggestions regarding the national report

Activity 1	Circulate drafts of the national report for comments and suggestions.
International costs	0
In-country costs	USD 235
Expected additional funding	0
Activity 2	Keep activity of year 2 with the Administrative Funding Council and the Technical Committee.
Deliverables:	In regard to this topic no printed material will be distributed.
Country responsibilities	Present to the Committees possible analysis with PISA data. Ask and systematise their opinion in regard to main educational problems that should be addressed through analysis.
Administrative details	Organise the agendas and presentations for these meetings. Invite participants and ensure the maximum of attendance. Keep records of the meetings.
International costs	0
In-country costs	USD 235
Expected additional funding	0

Total cost Year 3: USD 470

Summary: Total capacity-building element cost: USD 823

5.1.4. Capacity building element: School, student and out of school sampling

Ultimate goal for this capacity element:

- That DECE is able to draw its own samples and to ensure representativeness through quality control and good practices in test administration.

Assessment of capacity building elements:

Capacity building need	Current classification	Description
15-year-old census	Emerging	Information about out-of-school 15-year-olds is available from data sources updated with >5 year frequency.
Reliability of student attendance	Advanced	Student attendance is reliable, monitored, and enforced with attendance policies.
Location of 15-year-olds	Advanced	Information about location includes household addresses of 15-year-olds.
Household survey collection	Advanced	NC staff already has staff or existing relationship with resources for national survey collection.
Quality of school sample frame	Advanced	An EMIS is updated annually with an accurate frame.
Level of detail in administrative student data	Established	Students' data are recorded in central records that link student name and school name.
Information on student language of instruction	Advanced	Student information records the language of instruction for each subject This varies according to the geographical zone and the teacher may decide in what language does s/he teaches.
Information on school language of instruction	Established	School information contains predominant language of instruction.
Specialised skill for scientific probability sampling	Established	Survey design staff have experience designing self-weighting or unweighted complex samples (multi-stage clusters and stratification).
Quality of replacement sample	Advanced	The replacement sample provides random assignment of matched replacement(s) for each school.
NPM knowledge of language of assessments	Advanced	The national/system co-ordinator is fluent in the official language(s) of the assessment.

Year 2 goal (2016-2017): DECE is able to draw its own samples and to ensure representativeness through quality control and good practices in test administration

Activity 1	January 2016. January 2016 (Washington). Second NPM 4-5 day meeting: Contractor conducts international meeting on capacity building around adaptation, translation and verification of all survey materials and sampling. Already described and costed. January 2016 (Washington). Second NPM 4-5 day meeting: Contractor conducts international meeting on capacity building around adaptation, translation and verification of all survey materials and sampling.
Deliverables	Sampling Manual in Spanish. Forms for Sampling Framework. Software for completing sampling framework and for drawing the sample. Data management manual. Sampling framework and requirement for exclusions. Hands out. Presentations.
Reporting requirements	Entering data into the sampling framework.
Country responsibilities	Entering data into the sampling framework. Attend to the meeting. Read the materials sent beforehand. Meeting report. Share with the team when coming back.
Administrative details	Approval for travelling Passport Tickets.
Relevant documentation	Sampling manuals.
International costs	0
In-country costs	0
Expected additional funding	0
Activity 2	April 2016, Paraguay. Third NPM 4-5 day meeting: In liaison with the Contractors for Strand B and Strand C, Contractor holds international meeting on student sampling, FT survey operations, test administrator training. Description and costs in number 2: Upgrading existing and new quality procedures for PISA implementation.
Deliverables	School tracking forms, Student tracking forms, Sampling manual (if these process require software they should be distributed).
Country responsibilities	Reading documents previously sent. Discussing those documents with the whole team so that the person/s that assists asks everybody's questions. After the meeting, reproduce the workshops to their teams.
Administrative details	Register and booking of country participants.

Relevant documentation	Manuals and forms.
International costs	0
In-country costs	0
Expected additional funding	0

Total cost Year 2: USD 0

Year 3 goal (2017-2018): Prepare a final test sample according to PISA standards

Activity 1	May 2017, Washington or Senegal. Fifth NPM 4-5 day meeting: In liaison with the Contractors for Strands B and C, Contractor holds international meeting on analysis and interpretation of FT results, and preparation for MS including sampling and proposed draft MS instruments. Described and costed in number 2.
Deliverables	Manuals for student sampling. Software for student sampling.
Country responsibilities	Provide reliable data in regard to students in sampled schools.
Administrative details	Official authorisation for leaving the country Process tickets, Visas, per diem and travelling insurance.
International costs	0
In-country costs	0
Expected additional funding	0
Activity 2	July 2017, Guatemala. Sixth NPM 4-5 day meeting: Contractor conducts international meetings on capacity building around MS survey operations, MS student sampling, test administrator training, scoring and data management.
Deliverables	MS sampling manual.
Reporting requirements	Completed sampling framework. Sampling forms. Exclusion.
Country responsibilities	Be prepared for the meeting. Prepare for the meeting by reviewing the Sampling Manuals.
Administrative details	Tickets, Visas, per diems, authorisation and insurances.
Relevant documentation	MS sampling manual.
International costs	0
In-country cost	USD 20 480
Expected additional funding	0

Total cost Year 3: USD 20 480

Summary: Total capacity-building element cost: USD 20 480

5.2. Increased capacity for PISA and for national assessments

5.2.1. Capacity building element: Development area for preparation and storage of items

Ultimate goal for this capacity element:

- That the team is able to organise a quality process for item development and learn how to design, develop and correct open-ended questions.

Assessment of capacity building elements:

Capacity building need	Current classification	Description
Fidelity of administration in local contexts	Less than latent	This cannot be classified because DECE has never hired translators.
Integrity of coding	Established	Coders are selected from nominated applicants using transparent criteria
ILSA research and development funding	Advanced	Funding covers research and development activities.
Adequacy of translator assessment background		This cannot be classified because DECE has never hired translators.
Translator knowledge of PISA framework		This cannot be classified because DECE has never hired translators.
Fidelity of instrument translation and adaptation to local contexts		This cannot be classified because DECE has never hired translators.
English proficiency of NPM	Emerging	NPM can limited English fluency (i.e., passive communication with basic productive communication
NPM's and NC's Familiarity with PISA skill ontology / framework	Less than latent	The NC has no experience in instructing for abilities.

Year 1 goal (2015-2016): Improve item writing and be better prepared to assess and adapt PISA item. Learn how to write open-ended questions with their rubrics or marking guides.

Activity 1	September 2015, Ecuador. First NPM 4-5 day meeting: Contractor holds international meeting on existing PISA cognitive and contextual assessment frameworks, characteristics of the available item pools, and capacity building around item development, including training and peer-to-peer learning activities. PARAGUAY REQUIRES STRENGTHENING THEIR KNOWLEDGE IN REGARD TO DEVELOPING TABLES OF SPECIFICATIONS.
Country responsibilities	COSTS AND DESCRIPTIONS IN NUMBER 2. Upgrading existing and new quality procedures for PISA implementation.
International costs	0
In-country costs	0
Expected additional funding	0
Activity 2	Organise a workshop in collaboration with the OECD, IADB, Ecuador, Honduras and Guatemala to be developed in Spanish and, after that, develop some items in the country with the whole team. Four people, one of each subject area plus the NPM.
Deliverables	Item writing guidelines Forms in which to write items. Software for keeping items.
Reporting requirements	Submit items developed by the country team Report main difficulties Report capacity needs to be reinforced in the second workshop.
Country responsibilities	Other countries: Tickets and per diem, plus travel arrangements. Every country: Pay a proportion of the contractor and/or experts (fees, tickets and per diem).
Administrative details	Other countries: Tickets and per diem, plus travel arrangements.
Relevant documentation	Item writing guidelines.
International costs	0
In-country costs	USD 8 166
Expected additional funding	0

Total cost Year 1: USD 8 166

Year 2 goal (2016-2017): Ensure the learning of item writing (including open-ended questions) and receive feedback for items written on their own

Activity 1	January 2016, Washington. Three days follow-up second workshop in Spanish where countries will receive feedback to items written by country teams and additional training as required.
Deliverables	Item writing guidelines Forms in which to write items. Software for keeping items. Feedback to items sent Main difficulties encountered by the countries 2nd workshop program.
Reporting requirements	Items developed Feedback to them Workshop assessment.
Country responsibilities	Host country: Contract the venue and coffee breaks for the workshop, make reservations at a convenient price in a hotel and arrange participants' transport. Other countries: Tickets and per diem, plus travel arrangements. Every country: Pay a proportion of the contractor and/or experts (fees, tickets and per diem).
Administrative details	Host country: Contract all local services. Administrative requirements to pay the contract/and or experts. Other countries: Tickets and per diem, plus travel arrangements.
Relevant documentation	Feedback to items.
International costs	0
In-country costs	USD 4 575
Expected additional funding	0
Activity 2	2nd NPM International meeting, already described.
International costs	0
In-country costs	0
Expected additional funding	0

Total cost Year 2: USD 4 575

Summary: Total capacity-building element cost: USD 12 741

5.2.2. Capacity building element: Development area for research methodologies

Ultimate goal for this capacity element:

- Develop reports for specific audiences with complex and useful information. Develop complex multilevel and multivariable analysis that allows inputting educational policy making as well as improving teacher practices.

Assessment of capacity building elements:

Capacity building need	Current classification	Description
Media coverage of ILSA	Established	There is national media coverage of the ILSA results beyond national averages/percentages that includes correlations and demographic comparisons.
Management of linked data files	Established	Data processing staff have experience performing data merges using primary and foreign keys.
Data manipulation skill: manipulating data structures	Advanced	Staff have experience constructing or parsing proprietary formatted data files and text-based data files with defined formats.
Data manipulation skill: fluency with statistical software (e.g., SPSS, SAS)	Advanced	Data management is performed using syntax files.
NPM experience with dissemination of results from large scale assessment	Advanced	LSA reporting uses multiple narratives to multiple audiences, referencing relevant data where appropriate.

Year 3 goal (2017-2018): Develop a plan for analysing PISA data taking into account stakeholders' point of view. Discussions about it can extend up to 2017.

Activity:	March 2018, Senegal. Seventh NPM 4-5 day meeting: In liaison with the Contractors for Strands B and C, Contractor holds International Meeting on scaling methodology, and data analysis and reporting tools, including training and peer-to-peer learning activities.
Deliverables	Presentations and hands out. Briefing documents. Syntax in SPSS. Software manuals. Guidelines with types of analysis that can be carried out.
Reporting requirements	Distant work of the countries with the contractors by exchanging specific analysis and interpretations with feedbacks.
Country responsibilities	Provide notebooks so that participants can take their own notebook to work. Reading documents previously sent. Discussing those documents with the whole team so that the person that assists asks everybody's questions. Fulfil tasks assigned for period in between meetings. Travel arrangements.
Administrative details	Official authorisation for leaving the country Process tickets, Visas, per diem and travelling insurance.
International costs	0
In-country costs	USD 46 638
Expected additional funding	0

Year 3 (2017-2018): Develop a report according to the needs of Paraguayan stakeholders

Activity	YEAR 4: July 2018, Guatemala. Eighth NPM 10-15 day meeting: Contractor conducts international meetings on (Part 1) capacity building around analysis and interpretation of MS results and (Part 2) capacity building around preparations for reporting and dissemination of country reports.
Deliverables	Hands out. Presentations. Bibliography.
Reporting requirements	Those required by the contractor.
Country responsibilities	People should take their own notebooks. Arrange travel requirements.
Administrative details	Tickets, insurance, per diem, authorisations.
International costs	0
In-country costs	USD 26 250
Expected additional funding	0

Total cost Year 3: USD 72 888

Summary: Total capacity-building element cost: USD 72 888

5.2.3. Capacity building element: Development area for improving infrastructure

Ultimate goal for this capacity element:

- DECE expects to have a wide new building once the Institute is created and to have IT support of their own. Right now they depend on the services of the central Ministry.

Assessment of capacity building elements:

Capacity building need	Current classification	Description
Booklet distribution infrastructure	Not classified	The printing service is completely independent from transportation. Categories link them.
Computing security	Established	Staff follow institutional policies regarding regular software and antivirus definition updates.
Availability of training facilities	Established	Existing facilities may be repurposed to accommodate training.
Computing environment	Advanced	NC has dedicated workplace computers for all staff with standard software and network access.
Secure space for conducting the coding operations	Established	Multi-purpose facilities within the NC may be secured for coding.
Access to a reliable, high bandwidth Internet connection and e-mail facilities -	Advanced	NC has a fully networked environment with universal access to high bandwidth internet and email.
Software resources	Advanced	The NC administration maintains software licenses and manages acquisition and installation of necessary software.

Year 1:

There are no planned activities in this year.

Total cost Year 1: USD 0

Year 2:

There are no planned activities in this year.

Total cost Year 2: USD 0

Year 3:

There are no planned activities in this year.

Total cost Year 3: USD 0

Summary: Total capacity-building element cost: USD 0

5.2.4. Capacity building element: Development area for psychometric methods

Ultimate goal for this capacity element:

- That DECE is able to run psychometric item analysis by themselves, scale, equate and score. Also to interpret item psychometric data.

Assessment of capacity building elements:

Capacity building need	Current classification	Description
NC's understanding of item response theory	Advanced	NC staff have experience with multiple item response models (e.g., polytomous, Rasch, 2PL, 3PL).
NC's test development skills	Advanced:	NC staff have used classical test theory to examine items and test difficulty and discrimination/reliability and select.

Year 1 goal: Be prepared to understand and profit of the International Meeting about the pilot analysis

Total cost Year 1: USD 0

Year 3 (2017-2018): DECE is able to run psychometric item analysis by themselves, scale, equate and score. Also to interpret item psychometric data.

Activity	Workshop in Spanish in regard to the basics of psychometrics. Specifically they need to learn scaling (equating and item anchoring), scoring and how to interpret parameters in order to improve item writing. Costs consider that the workshop takes place in Paraguay or in Guatemala. DECE requires ensuring funds for this activity.
Deliverables	Notes on basic psychometrics. Bibliography Examples of items with parameters.
Reporting requirements	The countries provide their own database and go through the whole process. Countries submit their reports. Contractor and/or experts give feedback
Country responsibilities	Host country: Contract the venue and coffee breaks for the workshop, make reservations at a convenient price in a hotel and arrange participants' transport. Other countries: Tickets and per diem, plus travel arrangements. Every country: Pay a proportion of the contractor and/or experts' (fees, tickets and per diem).
Administrative details	Host country: Contract all local services. Administrative requirements to pay the contract/and or experts. Other countries: Tickets and per diems, plus travel arrangements.
Relevant documentation	Bibliography (hopefully in Spanish) Feedback to country exercises.
International costs	0
In-country costs	USD 5 793
Expected additional funding	0

Total cost Year 3: USD 5 793

<u>Summary:</u> Total capacity-building element cost: USD 5 793

6. Summary of capacity building plan costs for Paraguay

The table below shows that the total cost of the capacity building plan comes to two hundred and eighty-six thousand, two hundred and sixty-four dollars (USD 286 264). It does not include operating costs which are completely national and are budgeted for.

The bulk of the budget (68%) is earmarked to improving the implementation of P-D. However, funds allocated to improve PISA and national assessment processes are much lower (32%). Of all capacity building elements, the area receiving the most funds is that focussed on improving existing and new processes for implementing PISA, followed by the development of research methodologies. The division between capacity building areas focused on PISA and the national assessment seems to be somewhat simulated because learning will always be useful for both types of assessments.

The yearly sums budgeted hardly vary, with the first year being the lowest at 30% and the third year being greater as it includes both 2017 and 2018: 37% of the total.

Table 5. Summary of capacity building plan costs budgeted for

Training objective	Capacity building element	Year 1 (2015-16) USD	Year 2 (2016-17) USD	Year 3 (2017-18) USD	Total
5.1 PISA implementation	5.1.1. Product development, communication and dissemination	0	0	10 490	10 490
	5.1.2. Upgrading existing and new quality procedures for PISA implementation	30 006	85 925	47 658	163 589
	5.1.3. Stakeholder engagement	118	235	470	823
	5.1.4. School, student and out of school sampling	0	0	20 480	20 480
	Subtotal	**30 124**	**86 160**	**79 098**	**195 382**
5.2 Increased capacity for PISA and for national assessment	5.2.1. Development area for preparation and storage of items	8 166	4 575	0	12 741
	5.2.2. Development area for research methodologies	0	0	72 888	72 888
	5.2.3. Development area for improving infrastructure	0	0	0	0
	5.2.4. Development area for psychometric methods	0	0	5 793	5 793
	Subtotal	**8 166**	**4 575**	**78 681**	**91 422**
	TOTAL	**38 290**	**90 735**	**157 779**	**286 804**

7. Monitoring and assessment

Table 6. Indicators for monitoring and assessment based on the ultimate goals for each area of development

	Area for development	Ultimate goal	Indicators
1	Development of the product, communication and dissemination	To have a timeframe for assessments in the mid-term with secured funding. DECE expects this to happen when an independent institute is set up.	Calendar for national and international assessments published on the website.
2	Improvement of existing and new processes for implementing PISA	To have recruited specialist staff for all administrations and increase the number of professionals for analysis and instrument development.	To benefit from an organisational chart to position all the staff needed.
3	Commitment from the groups interested in the assessment	To develop a genuine assessment culture that stimulates people's demands for valid independent assessments. Stakeholders actively involved in helping with dissemination.	An advisory committee is on hand for the various stakeholders and they ensure the issue of assessment is on the agenda of all groups represented.
4	Development area for preparing and storing items	To ensure the team is able to organise a quality process for developing items and can learn to design, develop and correct open questions.	National tests with open questions. An item assessment process comprising various types of reviews and item validations, including external experts.
5	Sampling of schools, students and out-of-school 15 year olds	To ensure DECE is able to secure its own samples by itself and assure representativeness through quality controls and best practices in implementation.	Sampling and attendance rates according to PISA standards.
6	Development area for research methodologies	To develop specific reports on results for various audiences with useful, complex information. Multi-level, multivariate analyses making it possible to have a bearing on policy decisions and teaching practices.	Reports on results enhanced with explanatory analyses.
7	Development area for improving infrastructure	DECE expects to benefit from a spacious building to house the new institute with computer support.	Progress in the establishment and institutionalisation of the independent institute.
8	Development area for psychometric methods	To ensure DECE will be able to conduct the psychometric analyses of items individually, scaling, equating and scoring the results; also ensuring it will be able to interpret the psychometric parameters on items.	DECE is already solely responsible for processing the results of national tests.

8. Next steps

The four Latin American countries participating in PISA-D should shortly agree with the OECD and IADB on how they will organise themselves in order to prepare the Spanish language workshops they are requesting.

In addition, DECE should urgently recruit staff to fill outstanding gaps and be able to gain the capacities needed for the planned activities.

DECE needs to know more precisely the dates on which the contractors will send the various materials (tests and manuals) in order to more accurately prepare the timeframe for the project implementation plan (PIP). This has already been discussed and agreed on with the consultant and staff from DECE and shall be sent to the OECD shortly. Once the PIP has been concluded and the foregoing conditions met, DECE and indeed Paraguay itself will be ideally placed to embark on their own PISA-D tasks.

NOTES

1. OECD (2012), *NPM Manual PISA*, OECD, Paris.

2. OECD (2012), *NPM Roles and Responsibilities*, OECD, Paris.

3. OECD (2013), *PISA for Development Project Document (with Logical Framework)*, OECD, Paris, www.oecd.org/callsfortenders/ANNEX%20C.pdf.

4. See http://datos.bancomundial.org/pais/paraguay.

5. UNDP, 2013, http://hdr.undp.org/es/content/table-1-human-development-index-and-its-components.

6. Directorate-General for Statistics, Surveys and Censuses of Paraguay, www.comercioexterior.ub.edu/correccion/05-06/paraguay/geografia_econ3_poblacion.htm

7. National Constitution, Chapter VII on Education and Culture, Art. 77.

8. National Constitution, Chapter VII on Education and Culture, Art. 77.

9. See www.transparency.org/country/#PRY.

10. See Resolution no. 745-1 of 1995, Law no. 4088 of 13 September 2010 (at www.bacn.gov.py/NTg5&ley-n-4088) and Decree no. 6162 of 2011.

11. The study was promoted by the Ministry of Education and Culture on the context of the National Plan for Early Childhood Education (2003-2012) through the Programme for the Improvement of Early Childhood and Pre-school Education (2003-2008).

PISA FOR DEVELOPMENT
Capacity building plan: 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 plan covers the four-year PISA for Development cycle (2015-2018) and includes costed learning activities related to the implementation schedule of the project in Paraguay. PISA for Development is technically complex, operationally demanding and statistically advanced, and the capacity building plan therefore focuses on PISA components that will allow Paraguay to benefit from international benchmarking and from evidence on student performance derived from multivariate analyses, while also gaining capacity and competencies to raise the quality of its own national assessments through the use of item response theory methodology, rigorous international standards of implementation and increased analysis to provide explanations for the results.

The results from the Capacity Needs Analysis: Paraguay report have been used to design this 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.

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