Chapter 14: DATA ADJUDICATION

INTRODUCTION

The PISA-D Strand C Technical Standards (attached at Annex C of this Report) specify the way in which PISA-D Strand C must be implemented in each country. International contractors monitor the implementation of each of these standards and adjudicate on their adherence to them. This chapter describes the process used to adjudicate the implementation of PISA-D Strand C in each of the countries and gives the outcomes of data adjudication that are mainly based on the following aspects:

- the extent to which each country met PISA-D Strand C sampling standards
- the outcomes of the adaptation, translation, and verification process
- the outcomes of the PISA-D Strand C Quality Monitoring visits
- the quality and completeness of the submitted data.

As PISA-D Strand C was implemented as a pilot, the adjudication process was less formal than other OECD projects. While contractors did not keep a database with a rating scale to document the overall level of compliance to each standard, adherence to the standards was evaluated and documented on an ongoing basis throughout the phases of the project. This progress was summarised in various reports to the National Project Managers (NPMs) and shared with project stakeholders and the Technical Advisory Group (TAG). Following the Main Survey data collection, contractors presented the final sampling information and data analyses with the OECD and TAG members and made recommendations regarding any issues related to sampling, survey operations or data quality.

The areas covered in the PISA-D Strand C Technical Standards include the following:

Data standards

- target population and sampling
- adaptation of tests, questionnaires and manuals
- translation of assessment instruments, questionnaires and manuals
- testing and support of national software versions
- Field Trial participation
- security of the material
- assembling and printing paper-based questionnaires
- data collection
- materials development and training support
- field management
- quality monitoring
- data submission.

Management standards

- communication with the international contractors
- schedule for submission of materials
- management of data
- archiving of materials.

National involvement standards

- national feedback
- meeting attendance.

IMPLEMENTING THE STANDARDS—QUALITY ASSURANCE

National Project Managers (NPMs) of participating countries are responsible for implementing the standards based on the international contractors' advice as contained in the various operational manuals and guidelines. Throughout the cycle of activities for the PISA-D Strand C survey, the international contractors carried out quality assurance activities in two steps. The first step was to set up quality control procedures using the operational manuals, as well as the agreement processes for national submissions for various aspects of the project. These processes gave the international contractor staff the opportunity to ensure that PISA-D Strand C implementation was planned in accordance with the PISA-D Strand C Technical Standards and to provide advice on taking rectifying action when required and before critical errors occurred. The second step was quality monitoring, which involved the systematic collection of data that monitored the implementation of the assessment in relation to the standards. For data adjudication, it was the information collected during both the quality control and quality monitoring activities that was used to determine the level of compliance with the standards.

INFORMATION AVAILABLE FOR ADJUDICATION

The international contractors' quality monitoring of a country's data collection is carried out from a range of perspectives throughout the various stages of the PISA-D cycle. These perspectives include monitoring a country's adherence to the deadlines, communication from the sampling contractor about each country's sampling plan, information from the language verification team, data from the PISA-D Strand C Quality Monitors, and information ascertained from consultations with National Centre staff during National Project Managers' meetings or during informal virtual meetings. For more information on the various quality control monitoring activities in PISA-D Strand C, see Chapter 8.

The information was combined and disseminated through monthly status reports, monthly PISA-D Strand C Newsletters, and summarised in annual meeting presentations to the International Advisory Group (IAG) and Technical Advisory Group (TAG). Monthly status reports provided an opportunity for indications of noncompliance with the standards to be identified early on in order to enable rectifying measures and to serve as a tracking system for progress toward these measures.

Many of the data collection procedures referenced in the Technical Standards were specified in specific key documents and described in the National Project Manager's Manual and the Sampling Design Manual in particular. These are procedures that the international contractors require for Field Trial and Main Survey preparation from each National Centre. The data adjudication process provides a motivation for collating and summarising the specific information relating to PISA-D Strand C standards collected in these documents, combined with information collected from specific quality monitoring procedures such as the PISA-D Strand C Quality Monitor visits and from information in the submitted data.

QUALITY MONITORING REPORTS

The quality control and monitoring programme for PISA-D Strand C focused on a series of forms designed to guide the National Centres through important quality checks during the stages of instrument development (i.e. translation and adaptation), sampling, survey operations and field management procedures, and data management. Translation and adaptation forms were used to monitor the verification process of the survey instruments. Sample selection quality control forms and checks on the Survey Control File were designed to verify that the sample selection process was conducted accurately.

Each National Centre completed a Survey Planning Report in which they outlined plans for all aspects of data collection and reflected on any deviations from the Technical Standards. Once data collection began, sampling reports generated from the Case Management System were monitored on a weekly basis throughout the data collection period to identify potential issues in the sample, such as low response rates or potential for nonresponse bias. National Centres were required to complete quality control monitoring forms that covered issues related to field staffing and management, plans for contacting households/respondents, response rates and strategies for handling nonresponse, and quality control measures in the field. Monthly scheduled calls with the National Centres provided national teams with an opportunity to review progress on the survey as documented in quality control monitoring forms.

DATA ADJUDICATION PROCESS

The main aim of the adjudication process is to make a judgement on each national dataset in a manner that is transparent, based on evidence and defensible. The data adjudication process achieved this through the following steps:

Step 1: Quality control and quality monitoring data were collected throughout the survey administration period.

Step 2: Contractors compiled monthly country-by-country reports that contained quality assurance data for key areas of project implementation.

Step 3: The international contractors summarised quality control measure across the aspects of the project, with a focus on data collection activities, data analyses and the creation of sampling weights for the Technical Advisory Group. After a review of this information, the TAG and contractors made a determination with regard to the quality of the data from each adjudicated entity.

DATA ADJUDICATION

It was expected that the data adjudication would result in a range of possible recommendations. Some of these foreseen recommendations included that:

- the data be declared fit for use
- some data be removed for a particular country
- rectifying action be performed by the National Project Manager, such as providing additional evidence
- the data not be endorsed for use in certain types of analyses
- the data not be endorsed for inclusion in the PISA-D Strand C database.

Throughout PISA-D Strand C, the international contractors concentrated their quality control activities to ensure that the highest scientific standards were met. However, during data adjudication a wider definition of quality was used, especially when considering data that were at risk. In particular, the underlying criterion used in adjudication was fitness for use, meaning data were endorsed for use if they were deemed to be fit for meeting the overall intended purposes of PISA-D Strand C.

GENERAL OUTCOMES

In general, key guidelines were followed and countries were able to carry out all aspects of the PISA-D Strand C field operations to achieve the target number of completed cases. Deviations in adherence to trainings or implementation were addressed through guided discussions, and acceptable alternatives were identified, when necessary. While sampling-related quality checks were followed, the sample size requirements were not met in all countries. Honduras and Paraguay did not reach a sample size of 1 600 total completed responses. In addition, fewer than 1 300 respondents passed the core cognitive assessment in three countries: Guatemala, Honduras and Paraguay. As a result of the low sample yield, the number of responses per item was less than optimal for analyses. This had consequences on scaling and reporting in terms of larger standard errors and a limitation on analyses of proficiency that break the population into groups due to a risk of a low number of respondents per group.

In addition, contractors provided cautionary notes about each country's sample in terms of the population to which the Strand C estimates can be generalised. While some caution was due to the proportion of the sample coming from non-probability sampling methods, response bias and an overestimation or underestimation of target population totals also contributed to the limitations of generalisability. These cautionary remarks for each country are detailed in Chapter 9 of this Report.