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PISA quality monitoring

INTRODUCTION

PISA data collection activities were undertaken in accordance with strict quality assurance procedures. The quality assurance procedure that ensures the PISA 2015 data are fit for use consists of two components: first, to develop and document procedures for data collection; and second, to monitor and record the implementation of those procedures. Chapter 6 describes the procedures which national centres were required to follow while this chapter considers the second part of the process – monitoring quality.

While the aim of quality control is to establish effective and efficient procedures and guide the implementation process, quality-monitoring activities were implemented to observe and record any deviations from those agreed procedures during the implementation of the survey. These activities included:

- Field Trial and Main Survey Review Questionnaires
- National Centre Quality Monitor (NCQM) visits and consultations
- PISA Quality Monitor (PQM) visits.

FIELD TRIAL AND MAIN SURVEY REVIEW QUESTIONNAIRES

After the implementation of the field trial and the main survey, National Project Managers (NPMs) were asked to review and provide feedback to the international contractors on all aspects of their field operations. This information is used to guide future implementations of the assessment.

The Field Trial and Main Survey Review Questionnaires were organised around all aspects outlined in the NPM Manual:

- use of key documents and processes: use a rating system to review NPMs' level of satisfaction with the clarity of key documents and manuals
- communication with the international contractors
- review of the usefulness of the PISA Portal
- review of the quality of communication by activity
- implementation of national and international options: confirm if the National Centre had executed any national and international options as agreed
- review of the outcomes of and process for provision of national feedback on proposed test items
- security arrangements: review security arrangements to confirm they had been implemented
- sampling plan: confirm the PISA field trial and main survey tests were implemented as agreed in the sampling plan
- translation/adaptation/verification: review the translation, adaptation and verification processes to see if they were implemented in accordance with PISA technical standards and to a satisfactory level
- archiving of materials: confirm if the National Centre had archived the test materials in accordance with the technical standards
- printing: review the print quality agreement process
- test administration: review Test Administrators' training processes and test administration procedures
- quality assurance: review the PISA Quality Monitor (PQM) activity during the main urvey implementation at the international level
- coding: review coder training procedures, coding procedures, coding designs and the time required for coding
- data management: review the data management processes, including student sampling, database adaptation, data entry, coding of occupational categories, validity reports, and data submission.

NATIONAL CENTRE CONSULTATIONS

A large number of consultation meetings took place between senior staff of the international contractors and NPMs or other representatives of National Centres, in the context of NPM and training meetings. An extensive schedule of consultation meetings was developed prior to each meeting, and the consultations provided the opportunity for detailed discussion on a wide variety of PISA implementation matters on which additional advice or support was sought by the National Centre. In addition, the international contractors were in constant communication with all countries through email, Skype, webinars, and via the PISA Portal website.

PISA QUALITY MONITOR (PQM) VISITS

The international contractor responsible for overseeing survey operations implemented all phases of the PISA Quality Monitor (PQM) process: interviewing (by phone and Skype) and hiring candidates in each of the countries, organising their training, selecting the schools to visit, and collecting information from the PQM visits.

PQMs are independent contractors located in participating countries who are hired by the international survey operations contractor. They visit a sample of schools to observe test administration and to record the implementation of the documented field operations procedures in the main survey. Typically, 2 to 3 PQMs were hired for each country, and they visited an average of 15 schools in each country. In countries with short test periods, up to 17 monitors were hired to ensure that on average 15 schools were observed in each country. If there were adjudicated regions in a country, it was usually necessary to hire additional monitors, as a minimum of 5 schools were observed in adjudicated regions.

All PISA Quality Monitors are nominated by the NPMs through a formal process of submission of nominations to the international survey operations contractor. Based upon the NPM nominations, which were accompanied by candidate resumes, the survey operations contractor selected monitors who were independent from the National Centre (not paid by or reporting directly to the NPM), knowledgeable in testing procedures or with a background in education and research, and able to communicate fluently in English. Where the resume did not match the selection criteria, further information or an alternate nomination was sought. In a few cases, a PQM did not meet one or more of the above criteria mainly because he or she was not fluent in English.

The PQM Manual, PQM self-training package, the national and international versions of the Test Administrator's Manual and script, and copies of data collection forms were made available to all monitors upon receipt of their signed confidentiality agreement via email and post. Self-training involved reading the materials and completing a quiz. The quiz was reviewed by survey operations staff who provided feedback on incorrect responses. After completing this self-study, PQMs were required to participate in two trainings: a webinar conducted by the survey operations contractor to review their role and responsibilities, and an in-country Test Administrator training conducted by the National Centre to familiarise monitors with national procedures and policies.

At the same time, the international survey operations contractor provided support and addressed any issues or concerns via email, telephone, or Skype. The PQMs and the international survey operations contractor collaborated to develop a schedule of test administration site visits to ensure that a range of different schools was covered and that the schedule of visits was both economically and practically feasible. The international survey operations contractor paid the expenses and fees directly to each monitor.

The School Co-ordinator[1] in each school was responsible for providing a link between the NPM and the school, its students, teachers, and principal, as well as organising a suitable venue for the testing. The international survey operations contractor supplied each PQM with a list of schools he or she was scheduled to monitor. This list included the contact information for the School Co-ordinator for each school so the PQM could obtain details for the test day.

The majority of school visits were unannounced to the Test Administrator. This, of course, was not possible where the Test Administrator and the School Co-ordinator were the same person (School Associate).

Information collected in PQM visits during test administration

A Data Collection Form (DCF) was developed for PISA Quality Monitors to record their observations systematically during each school visit. The form covered the following areas:

- comparison of the adaptations to the English source versions of the school-level materials with the national language translations

- information about the National Centre's Test Administrator Training

- preparation for the assessment

- conducting the assessment

- general questions concerning the assessment.

PQMs recorded all key test session information using a hard copy of the Data Collection Form. After each session, the monitor entered the data from this form into the online version and submitted it to the international survey operations contractor. This form provided detailed data on test administration, including:

- session date and timing

- deviations from standard test procedures

- conduct of the students

- testing environment.

This information was used to check that the implementation in each school was in accordance with the PISA Technical Standards. The information was also called upon if a country's results showed, for example, a greater degree of country-item interaction.

DATA ADJUDICATION

All quality assurance data collected throughout the cycle were entered and collated in a central data adjudication database. Comprehensive reports were then generated for the Technical Advisory Group (TAG) for consideration during the data adjudication process (see Chapter 14).

The TAG experts used the consolidated quality-monitoring reports from the central data adjudication database to make country-by-country evaluations on the quality of field operations, translation, school and student sampling, and coding. The final reports by TAG experts were then used for the purpose of data adjudication that took place in June 2016.

Note

1. Throughout this document, the terms "School Co-ordinator" and "Test Administrator" are used when discussing the administration of the test in schools. However, please note that some countries use School Associates, individuals who fulfil the role of both School Co-ordinator and Test Administrator. School Associates received a School Associate's Manual and were trained by the National Centre.