Introduction

The previous issue of the PISA Newsletter discussed the PISA item formats and described the development of marking guides for the open-ended items. Continuing to focus on the instruments, the May issue presents the characteristics of the instruments and the test design used in PISA.

An update: This cycle
The PISA Main Study is underway and has been successfully implemented in many countries. In addition, key meetings took place in June and July. There was a Technical Advisory Group meeting, followed by meetings of the Functional Expert Groups. These meetings focused on the reporting scales and main study analyses.

The OECD continues to develop the dissemination strategy for PISA. An informal dissemination meeting took place in July with the purpose to plan the release of the initial PISA report as well as a first set of thematic reports.

An update: The future
With a few exceptions, most countries have confirmed their participation in the second PISA survey cycle. The second cycle will start in September 2000, with the main survey implementation planned for 2003.

The OECD is currently developing a strategy to respond to the increased demand from non-OECD countries to join PISA. A field trial for these countries will be taking place in 2000 and the main study in 2001. This will allow for comparisons to be made with the OECD PISA data collection.

Since February, two important calls for tender have been launched: one for the implementation of the second PISA survey cycle and another for the development of a longitudinal school-to-work transition survey. The contract for the second cycle of PISA has been awarded to the Australian Council for Educational Research (ACER).

The PISA Cognitive Instruments

PISA has been conceived using a broad definition of literacy that assesses the extent to which students have mastered basic knowledge and skills needed to participate effectively in today’s society.

In line with the objectives of PISA, the cognitive instruments were developed with a perspective to assess a broad range of issues, while going beyond the school-based curriculum of participating countries. The PISA items were developed with three dimensions in mind: the content or structure of knowledge that students need to acquire, the processes that students need to undergo, and the situation or context in which knowledge and skills are applied.

The development of the PISA instruments was a co-operative effort between: i) the Functional Expert Groups which established the theoretical foundation for the instruments, ii) the participating countries which contributed assessment material and reviewed the...
international item pool, and iii) PISA test developers responsible for translating the expert groups’ objectives into the instruments. The field trial is one of the requirements to achieving highly valid and appropriate instruments. For PISA’s field trial, which took place in 1999, approximately three times the amount of material needed for the main study was administered to representative samples of students in all participating countries. In addition to evaluating the quality of the items, this activity was also important for testing the survey operations and the national team of translators and coders.

The Test Design

The purpose of PISA is to cover a wide range of material within the limitations of a paper-and-pencil instrument and two hours of assessment time per student. In order to achieve this objective, PISA instruments are built on a set of booklets that are rotated among participating students to ensure that comparable results can still be obtained.

The main study includes six and a half hours of testing material organised into nine booklets; with each booklet requiring two hours of testing time. Reading, the major domain, accounts for 270 minutes of material, which is organised into nine reading blocks of 30 minutes each. The mathematics and science materials, as minor domains, account for 60 minutes each of testing material, organised into 8 blocks of 15 minutes.

This design has several features. First, the reading material is presented in a balanced way in order to avoid position effects and to ensure that each item has equal weight in the assessment. Second, seven of the nine booklets begin with reading and all booklets contain at least 60 minutes of reading; five booklets will also contain science material and five will contain mathematical material. Third, there will be a link between PISA and IALS results through two blocks that contain IALS items. These blocks are presented in a total of six booklets. Finally, this design ensures that a representative sample of students respond to each block of items.

The field trial provided an opportunity to examine the appropriateness of the instruments’ length. Using special methods to estimate time, it was possible to analyse the length of the field trial instruments and to transfer that information to the main study booklets. During the field trial, the number of words was identified as the main determinant for the length of the tests. In the English version, an upper limit of 3500 words per session (60 minutes of testing) was identified as appropriate and applied to the main study instruments.

Other Important Issues

Call for tender for the second cycle of PISA

On 14 April 2000 the OECD launched the call for tender to implement the second cycle of OECD PISA.

In early June, a committee appointed by the Board of Participating Countries reviewed the proposals and prepared a report. The Board of Participating Countries Executive group discussed the report at its meeting in mid-June. Consultations with countries allowed for a contract to be agreed on and finalised in August.
Call for tender for the longitudinal school-to-work transitional survey

On 5 May 2000, the OECD issued the call for tender for the development of a longitudinal school-to-work transition survey as part of the second cycle of OECD PISA. A proposal was received in July 2000, which will be discussed with the Board of Participating Countries in October 2000.

Dissemination Strategy for PISA

The Board of Participating Countries continues to develop the strategy for PISA. Beyond the initial report that will communicate key results to a broad audience, a series of thematic reports are being developed. The themes covered by these reports include:

- Social background and student achievement;
- Engagement and motivation;
- Meeting the needs of low and high achieving students;
- School factors related to quality and equity;
- An international profile of reading literacy; and
- Gender differences in achievement.

The proposals will be discussed by the Board of Participating Countries at its meeting in October 2000. A revised version will be re-discussed by an international meeting on dissemination on 6-7 December 2000.

The PISA Web Site

The OECD/PISA web site is now available at the following address http://www.pisa.oecd.org. The PISA web site:

- provides information on programme’s development;
- provides contact names and addresses for the OECD, the consortium and participating countries; and
- provides materials that can be downloaded (i.e. newsletters and other publications);
- provides automatic registration to received new issues of the newsletters; and
- presents an interactive set of sample items including multiple choice items that are automatically scored and open-ended items that can be self-scored using the scoring criteria (this is the same set of items included in the publication Measuring student knowledge and skills: The PISA 2000 assessment of reading, mathematical and scientific literacy).

Relevant Publications

Investing in Education – Analysis of the 1999 World Education Indicators (February 2000)

This publication focuses on the comparative performance of education systems, with an analysis that extends to the financial and human resources invested in education, how education and learning systems operate and evolve, and to the returns to educational investment. In addition, it presents a profile of the participating countries regarding government priorities and recent trends.

Countries covered in this report are: Argentina, Brazil, Chile, China, Egypt, India, Indonesia, Jordan, Malaysia, Paraguay, the Philippines, the Russian Federation, Sri Lanka, Thailand and Zimbabwe.

Measuring Student Knowledge and Skills: The PISA 2000 assessment of reading, mathematical and scientific literacy (April 2000)

This is the second issue in the PISA series Measuring Student Knowledge and Skills.

It introduces the PISA approach to assessing reading, mathematical and scientific literacy and describes the PISA 2000 assessment instruments in terms of: the content that students need to acquire, the processes that need to be performed, and the contexts in which knowledge and skills are applied. Each of the assessment domains is illustrated with a broad range of sample items.

This publication is also available in French.


The OECD indicators reflect a consensus on how to measure the current state of education on an international scale. It reports internationally comparable data on lifelong learning and its impact on society and the economy.

This year’s edition presents indicators on:

- the context in which education systems operate;
- financial and human resources invested in education;
- access to education, participation, progression and completion;
- the learning environment and the way in which school systems are organised;
- individual, social and labour market outcomes in education; and
- student achievement.

This publication is available in English, French and German.
The eighth Meeting of the Board of Participating Countries

The eighth meeting of the Board of Participating Countries governing the OECD Programme for International Student Assessment was held on 13-15 March 2000 in Melbourne, Australia. The primary objectives of this meeting were to:

- review the findings from the first phase of the external evaluation of PISA and to discuss their implications for: the ongoing PISA cycle, the terms of reference for the second PISA cycle, and the long-term development of the PISA data strategy;
- finalise the terms of reference for the second PISA survey cycle and to establish the procedures for the tendering process, the evaluation of proposals, and the negotiation and awarding the contract;
- establish the budgetary framework for PISA for 2001; and
- review progress in the development of the PISA dissemination strategy, with a focus on sharing views and experiences on priorities and plans for data development, analysis and dissemination at national levels.

Technical Advisory Group Meeting

The PISA technical advisory group met in Rockville, U.S.A. on 15-17 June 2000. In addition to the official members, the chairs of the Functional Expert Groups were also present, as proficiency scales were one of the important topics for discussion.

The group received an update of the work undertaken during this last year, discussed the status of national samples, procedures for variance component estimates, procedures for data cleaning and processing, data adjudication, the construction of described proficiency scales and evaluated the proposals for thematic reports. Focus was also directed towards testing design for PISA Cycle II.

Reading, Mathematics and Science Functional Expert Group Meetings

The Functional Expert Groups met in Arnhem, the Netherlands on 19-22 June 2000. Their working agenda focused on the development and description of proficiency scales.

The work during these past months has been geared towards identifying possible reporting scales within each domain. Prior to the meeting, the test developers, in consultation with the chairs, described the skills and knowledge required to reach each achievement threshold (or score point) within each item. The descriptions were revised during the meetings and further progress was achieved on describing proficiency levels in the proficiency scales. The group also focused on issues related to their roles and activities in Cycle II.

Expert Meeting on PISA Dissemination

The expert meeting on PISA dissemination took place in Paris, France on 12-13 July 2000 and was attended by Ms. Jeanne Griffith (Chair), Mr. Thomas Alexander, Mr. Donald Hirsch, Mr. Jürgen Baumert, Mr. Ray Adams, Mr. Eugene Owen, Ms. Aletta Grisay, Mr. Andreas Schleicher and Ms. Claudia Tamassia.

Much of the discussion focused on the initial report and how to make it most useful for policy-makers in terms of its content and key messages, its organisation, format, presentation of tables and graphics.

Contributions:

We welcome your input for future issues of this newsletter. If you have information that you would like to share with other participants in the project, please contact Mrs. Claudia Tamassia at Claudia.TAMASSIA@OECD.org.