

## PISA – Programme for International Student Assessment.

Origin of the study	Responding to member countries' demands for regular and reliable data on the knowledge and skills of their students and the performance of their education systems, the OECD began work on the Programme for international Assessment (PISA) in the mid-1990s. PISA was officially launched in 1997, with the first survey taking place in 2000, the second in 2003 and the third in 2006. Future surveys will be implemented in 2009, 2012, and 2015.
<b>Management Structure</b>	
Statement of purpose.	<p>PISA aims to measure how far students approaching the end of compulsory education have acquired some of the knowledge and skills essential for full participation in the knowledge society. The assessment is forward looking, focusing on young people's ability to use their knowledge and skill to meet real-life challenges, rather than merely on the extent to which they have mastered a specific school curriculum.</p> <p>The PISA assessment provides three main types of outcomes:</p> <ul style="list-style-type: none"> <li>- Basic indicators that provide baseline profile of the knowledge and skills of students in the three main domains (reading, mathematical and scientific literacy)</li> <li>- Contextual indicators that show how such skills relate to important demographic, social, economic and educational indicators</li> <li>- Indicators on trends that emerge from the on-going nature of the data collection and that shows changes in outcomes levels and distributions, and in relationships between student-level and school-level background variable and outcomes</li> </ul> <p>Two other outcomes, namely assessing students' attitudes in the main domains and developing a knowledge base for policy analysis and research, are also covered by PISA.</p> <p>PISA's key features are the following:</p> <ul style="list-style-type: none"> <li>- Its policy orientation, with design and reporting methods determined by the need of governments to draw policy lessons</li> <li>- Its innovative "literacy" concept, which is concerned with the capacity of students to apply knowledge and skills in key subject areas and to analyse, reason and communicate effectively as they pose, solve and interpret problems in a variety of situations</li> <li>- Its relevance to lifelong learning, which does not limit PISA to assessing students' curricular and cross-curricular competencies but also asks them to report on their own motivation to learn, their beliefs about themselves and their learning strategies</li> <li>- Its regularity, which will enable countries to monitor their progress in meeting key learning objectives</li> <li>- Its contextualization within the system of OECD education indicators, which examine the quality of learning outcomes, the policy levers and contextual factors that shape these outcomes, and the broader private and social returns to investments in education</li> <li>- Its breadth of geographical coverage and collaborative nature, with more than 60 countries (covering roughly nine-tenths of the world economy) having participated in PISA assessments to date, including all 30 OECD countries</li> </ul>
Funded by	PISA is financed exclusively through direct contributions from participating countries, made through each country's education ministry.
Affiliations.	
Consortium	The design and implementation of PISA 2006, within the framework established by the PISA Governing Board, is the responsibility of an international consortium, referred to as the PISA Consortium, led by the Australian Council for Educational Research (ACER). Other partners in this consortium include the Netherlands National Institute for Educational Measurement (Citogroep), the National Institute for Educational Policy Research in Japan (NIER) and WESTAT in the United States.
Government partners	
Expert panels	PISA represents a collaborative effort among the OECD member governments to provide a new kind of assessment of student achievement on a recurring basis. The assessments are developed co-operatively, agreed by participating countries, and implemented by national organisations. The <b>PISA Governing Board</b> (PGB), representing all nations at the senior policy levels, determines the policy priorities for PISA in the context of OECD objectives and oversees

	<p>adherence to these priorities during the implementation of the programme. Each OECD country participating in PISA has a representative on the PISA Governing Board, appointed by the country's education ministry. Each partner country participating in PISA has an observer on the board, appointed by the country's education ministry. The chair of the PISA Governing Board is chosen by the Board itself. Guided by the OECD's education objectives, the Board determines the policy priorities for PISA and makes sure that these are respected during the implementation of each PISA survey. This includes setting priorities for the development of indicators, for the establishment of the assessment instruments and for the reporting of the results.</p> <p>Participating countries take responsibility for the project at the policy level. Experts from participating countries also serve on working groups, charged with linking the PISA policy objectives with the best internationally available technical expertise in the different assessment domains. By participating in these expert groups, countries ensure that the instruments are internationally valid and take into account the cultural and educational contexts in OECD member countries. They also ensure that the assessment materials have strong measurement properties and that the instruments emphasise authenticity and educational validity. There are four expert groups: the Science Expert Group, the Mathematics Expert Group, the Reading Expert Group, and the Questionnaire Expert Group. The Subject Matter Expert Groups are made up of world experts in each area. They design the theoretical framework for each PISA survey. The Questionnaire Expert Group provides leadership and guidance in the construction of the PISA context questionnaires.</p> <p><u>Expert Groups members for PISA 2006</u></p> <p><b>Science Expert Group</b></p> <ul style="list-style-type: none"> <li>• Rodger Bybee (Chair) (BSCS, Colorado Springs, USA)</li> <li>• Ewa Bartnik (Warsaw University, Poland)</li> <li>• Peter Fensham (Queensland University of Technology, Australia)</li> <li>• Paulina Korsnakova (National Institute for Education, Slovak Republic)</li> <li>• Robert Laurie (University of New Brunswick, Canada)</li> <li>• Svein Lie (University of Oslo, Norway)</li> <li>• Pierre Malléus (Ministère de l'Éducation nationale, Paris, France)</li> <li>• Michelina Mayer (INVALSI, Frascati, Italy)</li> <li>• Robin Millar (University of York, UK)</li> <li>• Yasushi Ogura (National Institute for Educational Policy Research, Japan)</li> <li>• Manfred Prenzel (University of Kiel, Germany)</li> <li>• Andrée Tiberghien (University of Lyon, France)</li> </ul> <p><b>Reading Expert Group</b></p> <ul style="list-style-type: none"> <li>• John de Jong (Chair from Sept 2005) (Language Testing Services, Netherlands)</li> <li>• Irwin Kirsch (Chair to Sept 2005) (Education Testing Service, New Jersey, USA)</li> <li>• Marilyn Binkley (National Centre for Educational Statistics, Washington, USA)</li> <li>• Alan Davies (University of Edinburgh, UK)</li> <li>• Stan Jones (Statistics Canada)</li> <li>• Dominique Lafontaine (Université de Liège, Belgium)</li> <li>• Martine Rémond (IUFM de Créteil et Université Paris, France)</li> </ul> <p><b>Mathematics Expert Group</b></p> <ul style="list-style-type: none"> <li>• Jan de Lange (Chair) (Freudenthal Institute, Utrecht University, the Netherlands)</li> <li>• Werner Blum (University of Kassel, Germany)</li> <li>• John Dossey (Consultant, USA)</li> <li>• Zbigniew Marciniak (University of Warsaw, Poland)</li> <li>• Mogens Niss (University of Roskilde, Denmark)</li> <li>• Yoshinori Shimizu (University of Tsukuba, Japan)</li> </ul> <p><b>Questionnaire Expert Group</b></p> <ul style="list-style-type: none"> <li>• David Baker (Pennsylvania State University, USA)</li> <li>• Rodger Bybee (BSCS, Colorado Springs, USA)</li> <li>• Aletta Grisay (Consultant, Paris, France)</li> <li>• David Kaplan (University of Wisconsin – Madison, USA)</li> <li>• John Keeves (Flinders University, Australia)</li> <li>• Reinhard Pekrun (University of Munich, Germany)</li> <li>• Erich Ramseier (Abteilung Bildungsplanung und</li> </ul>
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<b>Data set basic information.</b>	
Dates.	2000, 2003 and 2006
Countries.	<p>In PISA 2000, 31 countries participated in the assessment:</p> <p>Australia, Austria, Belgium, Brazil*, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, , Hungary, Iceland, Ireland, Italy, Japan, Korea, Latvia*, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Russian Federation*, Spain, Sweden, Switzerland, United Kingdom, United States.</p> <p>PISA PLUS, (a replication of PISA 2000 using the same design and the same instruments, providing the same set of indicators and comparable results, while using a new timeline to accommodate additional interested countries) was also implemented in 2002 in the following countries:</p> <p>Albania*, Argentina*, Bulgaria*, Chile*, Hong Kong-China*, Indonesia*, Israel*, Liechtenstein*, FYR Macedonia*, Peru*, Romania* and Thailand*</p> <p>In PISA 2003, 41 countries participated in the assessment:</p> <p>Australia, Austria, Belgium, Brazil*, Canada ,Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong-China*, Hungary, Iceland, Indonesia*, Ireland, Italy, Japan, Korea, Latvia*, Liechtenstein*, Luxembourg, Macao-China*, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Russian Federation*, Serbia and Montenegro*, Slovak Republic, Spain, Sweden, Switzerland, Thailand*, Tunisia*, Turkey, United Kingdom, United States, Uruguay*.</p> <p>In PISA 2006, 57 countries participated in the assessment:</p> <p>Argentina*, Australia, Austria, Azerbaijan*, Belgium, Brazil*, Bulgaria*, Canada, Chile*, Colombia*, Croatia*, Czech Republic, Denmark, Estonia*, Finland, France, Germany, Greece, Hong Kong-China*, Hungary, Iceland, Indonesia*, Ireland, Israel*, Italy, Japan, Jordan*, Korea, Kyrgyz Republic*, Latvia*, Liechtenstein*, Lithuania*, Luxembourg, Macao-China*, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Qatar*, Republic of Montenegro*, Republic of Serbia*, Romania*, Russian Federation*, Slovak Republic, Slovenia*, Spain, Sweden, Switzerland, Chinese Taipei*, Thailand*, Tunisia*, Turkey, United Kingdom, United States, Uruguay*.</p> <p>The above countries are Members of the OECD, except those marked with an asterisk (*).</p>
Contents.	<p>PISA covers the domains of <i>reading</i>, <i>mathematical</i> and <i>scientific literacy</i> not so much in terms of mastery of the school curriculum, but in terms of important knowledge and skills needed in adult life. Literacy in PISA is assessed through units consisting of a stimulus (e.g. text, table, chart, figures etc.) followed by a number of tasks associated with this common stimulus. This is an important feature, allowing questions to go into greater depth than they could if each question introduced a wholly new context. It allows time for the student to digest material that can then be used to assess multiple aspects of performance. Emphasis is placed on the mastery of processes, the understanding of concepts and the ability to function in various situations within each domain. PISA assesses student performance beyond the confines of reading, mathematics and science. Cross curricular competencies are also assessed by PISA, such as: self-regulated learning (2000), problem-solving (2003), attitudes towards science (2006), and meta-cognition and reading engagement (2009).</p> <p>In each three-yearly PISA survey, one subject (domain) is chosen as a focus while two other subject areas are assessed more briefly. This allowed, for each subject area, a detailed profile of what a country's students can do every nine years, and an update of their performance every three years.</p> <p>Similar to the previous assessments in PISA, the assessment in 2006 consists of pencil and paper instruments for reasons of feasibility. The assessment includes a variety of types of questions. Some require students to select or produce simple responses that can be directly compared with a single correct answer, such as multiple-choice or closed-constructed response items. These questions have either a correct or incorrect answer and often assess lower-order skills. Others are more constructive, requiring students to develop their own responses designed to measure broader constructs than those captured by more traditional surveys, allowing for a wider range of acceptable responses and more complex marking that can include partially correct responses.</p> <p>Not all students answer all questions in the assessment. The PISA 2006 test units are arranged in 13 clusters, with each cluster designed to occupy 30 minutes of testing time. There are seven science clusters, two reading clusters and four mathematics clusters. The clusters are placed in 13 booklets, according to a rotated test design. Each booklet contains four clusters and each student is assigned one of these two-hour booklets. There is at least one science cluster in each booklet.</p> <p>To gather contextual information, PISA asks students and the principals of their schools to respond to background questionnaires of around 30 minutes in length. These questionnaires are central to the analysis of results in terms of a range of student and school characteristics.</p> <p>The questionnaires seek information about:</p> <ul style="list-style-type: none"> <li>Students and their family backgrounds, including their economic, social and cultural capital</li> </ul>

	<ul style="list-style-type: none"> <li>Aspects of students' lives, such as their attitudes towards learning, their habits and life inside school, and their family environment</li> <li>Aspects of schools, such as the quality of the schools' human and material resources, public and private control and funding, decision-making processes, and staffing practices</li> <li>Context of instruction, including institutional structures and types, class size, and the level of parental involvement</li> <li>Strategies of self-regulated learning, motivational preferences and goal orientations, self-related cognition mechanisms, action control strategies, preferences for different types of learning situations, learning styles, and social skills required for co-operative or competitive learning</li> <li>Aspects of learning and instruction in science, including students' motivation, engagement and confidence with science, and the impact of learning strategies on achievement related to the teaching and learning of science</li> </ul> <p>In PISA 2006, two additional questionnaires are offered as international options:</p> <ul style="list-style-type: none"> <li>A computer familiarity questionnaire</li> <li>A parent questionnaire.</li> </ul>
Core data includes:	<p>Core data is gathered through the assessment on each of the three domains of reading, mathematical and scientific literacy, with one domain as a focus at every wave.</p> <p>The student-level and school-level background questionnaires are an integrated part of the core data as well.</p>
Contextual data includes:	PISA administers background questionnaires to students and the principals of their schools. The questions are designed to measure key aspects of students' home and school environments. See above.
Requirements of access.	Access is free and available online at <a href="http://www.pisa.oecd.org/">http://www.pisa.oecd.org/</a>
<b>Next wave/project.</b>	
Next date and availability.	For PISA 2009, 67 countries have already signed up.
New content / questions.	PISA 2009 will return to reading as the major assessment area. It will also assess, as an international option, students' capacity to read and understand electronic texts. An educational career questionnaire will be an international option.
Countries to be added.	<p>PISA 2006 included 17 countries that did not take part in PISA 2003: Argentina, Azerbaijan, Bulgaria, Chile, Colombia, Croatia, Estonia, Israel, Jordan, Kyrgyz Republic, Lithuania, Qatar, Republic of Montenegro, Republic of Serbia (formerly Serbia and Montenegro), Romania, Slovenia, and Chinese Taipei.</p> <p>PISA 2009 will include the following countries that did not take part in PISA 2006: Albania, China - Shanghai, Dominican Republic, Dubai, Kazakhstan, Moldova, Panama, Peru, Singapore, and Trinidad and Tobago.</p>
Previous content not repeated in the next wave.	
Countries not repeating the study in the next wave.	<i>None</i>
Previous waves/projects.	PISA 2000 and PISA 2003.
Previous content / questions and countries.	The main focus of PISA 2000 was on reading literacy. In PISA 2003, the emphasis was on mathematical literacy and an additional domain on problem solving was introduced. PISA 2006 cycle focuses on scientific literacy.
<b>Methodology</b>	
Sources and collection methods.	Data was collected through the administration of background questionnaires and assessment instruments, as described above.
Unit of analysis.	National systems of education are the unit of analysis, with students as the unit of measurement. PISA covers students who are aged between 15 years 3 months and 16 years 2 months at the time of the assessment and who have completed at least 6 years of formal schooling, regardless of the type of institution in which they are enrolled and of whether they are in full-time or part-time education, of whether they attend academic or vocational programmes, and of whether they attend public or private schools or foreign schools within the country.
What is the sample design?	The sampling design used for the PISA assessment was a two-stage stratified sample in most countries. The first-stage sampling units consisted of individual schools having 15-year-old students. In all but a few countries, schools were sampled systematically from a comprehensive national list of all eligible schools with probabilities that were proportional to a measure of size. This is referred to as probability proportional to size (PPS) sampling.

	<p>The measure of size was a function of the estimated number of eligible 15-year-old students enrolled. Prior to sampling, schools in the sampling frame were assigned to strata formed either explicitly or implicitly. The second-stage sampling units in countries using the two-stage design were students within sampled schools. Once schools were selected to be in the sample, a list of each sampled school's 15-year-old students was prepared. From each list that contained more than 35 students, 35 students were selected with equal probability, and for lists of fewer than 35, all students on the list were selected. It was possible for countries to sample a number of students within schools other than 35, provided that the number sampled within each school was at least as large as 20.</p> <p>In two countries, a three-stage design was used. In such cases, geographical areas were sampled first (called first-stage units) using probability proportional to size sampling, and then schools (called second-stage units) were selected within sampled areas. Students were the third-stage sampling units in three-stage designs.</p>
Sample threshold	Tests are typically administered to a minimum of 4,500 students (or the National Defined Target Population) from at least 150 schools in each country. In PISA 2006, more than 400,000 students took part in the assessment, representing about 20 million 15-year olds in the 57 participating countries.
Collection window?	<p>For PISA 2000 the international requirement was that the assessment had to be conducted during a 42-day period between 1 March 2000 and 31 October 2000.</p> <p>For PISA 2003 the international requirement was that the assessment had to be conducted during a 42-day period between 1 March 2003 and 31 August 2003, at least 3 years after the PISA 2000 assessment for the PISA 2000 participating countries.</p> <p>For PISA 2006 the international requirement was that the assessment had to be conducted during a ...-day period between 1 March 2006 and 31 August 2006, at least 3 years after the PISA 2003 assessment.</p>
<b>Planning process</b>	
Who is involved in the planning process	<p>The design and implementation of PISA is the responsibility of the international consortium mentioned above, led by ACER. The consortium implements PISA within a framework established by the PGB, who establishes policy priorities and standards for developing indicators, for establishing assessment instruments, and for reporting results in conjunction with the Expert Panels. All PISA countries are invited to submit questions to the international consortium; in addition, the international consortium also writes some questions. The questions are reviewed by the international consortium and by participating countries and are carefully checked for cultural bias. Only those questions that are unanimously approved are used in PISA. Further, before the real test there is a trial run in all participating countries. If any test questions prove to have been too easy or too hard in OECD countries, they are dropped from the real test in all countries.</p> <p>Participating countries implemented PISA nationally through National Project Managers (NPMs), who respected common technical and administrative procedures. These managers played a vital role in developing and validating the international assessment instruments and ensured that PISA implementation was of high quality. The NPMs also contributed to the verification and evaluation of the survey results, analyses and reports.</p> <p>The OECD Secretariat had overall responsibility for managing the programme. It monitored its implementation on a day-to-day basis, served as the secretariat for the PGB, fostered consensus building between the countries involved, and served as the interlocutor between the PGB and the international consortium.</p>
When are the questionnaires finalised?	For PISA 2006, the questionnaires were finalised in December 2004 for field trial and they were also finalised in December 2005 for the main study.
What modules are included?	
Can countries add their own items?	Yes. Participating countries are free to add their own items, or to delete items from the questionnaire under the supervision of the international consortium.
<b>Links</b>	
Home page for the website	<a href="http://www.pisa.oecd.org/">http://www.pisa.oecd.org/</a>
To access the data online	<p>The international database for PISA 2000 data is available online at <a href="http://pisaweb.acer.edu.au/oecd/oecd_pisa_data.html">http://pisaweb.acer.edu.au/oecd/oecd_pisa_data.html</a></p> <p>The international database for PISA 2003 data is available online at <a href="http://pisaweb.acer.edu.au/oecd_2003/oecd_pisa_data.html">http://pisaweb.acer.edu.au/oecd_2003/oecd_pisa_data.html</a></p> <p>The international database for PISA 2006 data is available online at <a href="http://pisa2006.acer.edu.au/">http://pisa2006.acer.edu.au/</a></p>
To access the international report	<p>PISA 2000</p> <p><a href="http://www.oecd.org/document/46/0,3343,en_32252351_32236159_33688686_1_1_1_1,00.html">http://www.oecd.org/document/46/0,3343,en_32252351_32236159_33688686_1_1_1_1,00.html</a></p> <p>PISA 2003</p> <p><a href="http://www.oecd.org/document/55/0,3343,en_32252351_32236173_33917303_1_1_1_1,00.html">http://www.oecd.org/document/55/0,3343,en_32252351_32236173_33917303_1_1_1_1,00.html</a></p> <p>PISA 2006</p>

	<a href="http://www.oecd.org/document/2/0,3343,en_32252351_32236191_39718850_1_1_1_1,00.html">http://www.oecd.org/document/2/0,3343,en_32252351_32236191_39718850_1_1_1_1,00.html</a>
How to access the technical reports	<p>The PISA 2000 technical report is available online at  <a href="http://www.pisa.oecd.org/document/7/0,3343,en_32252351_32236159_33688711_1_1_1_1,00.html">http://www.pisa.oecd.org/document/7/0,3343,en_32252351_32236159_33688711_1_1_1_1,00.html</a></p> <p>The PISA 2003 technical report is available online at  <a href="http://www.pisa.oecd.org/document/13/0,3343,en_32252351_32236173_35188685_1_1_1_1,00.html">http://www.pisa.oecd.org/document/13/0,3343,en_32252351_32236173_35188685_1_1_1_1,00.html</a></p> <p>The PISA 2006 technical report will be available online in summer 2008.</p>
To access national reports	<p>Some PISA 2000 country reports are available online at  <a href="http://www.pisa.oecd.org/document/3/0,3343,en_32252351_32236159_33680899_1_1_1_1,00.html">http://www.pisa.oecd.org/document/3/0,3343,en_32252351_32236159_33680899_1_1_1_1,00.html</a></p> <p>Some PISA 2003 country reports are available online at  <a href="http://www.pisa.oecd.org/document/62/0,3343,en_32252351_32236159_34575550_1_1_1_1,00.html">http://www.pisa.oecd.org/document/62/0,3343,en_32252351_32236159_34575550_1_1_1_1,00.html</a></p> <p>Some PISA 2006 country reports are available online at  <a href="http://www.oecd.org/document/12/0,3343,en_32252351_32236191_39830476_1_1_1_1,00.html">http://www.oecd.org/document/12/0,3343,en_32252351_32236191_39830476_1_1_1_1,00.html</a></p>
To access a list of research that uses the data	<p>Research based on PISA 2000 data available online at  <a href="http://www.pisa.oecd.org/document/61/0,3343,en_32252351_32236159_33680573_1_1_1_1,00.html">http://www.pisa.oecd.org/document/61/0,3343,en_32252351_32236159_33680573_1_1_1_1,00.html</a></p> <p>Research based on PISA 2003 data available online at  <a href="http://www.pisa.oecd.org/document/10/0,3343,en_32252351_32236173_34342538_1_1_1_1,00.html">http://www.pisa.oecd.org/document/10/0,3343,en_32252351_32236173_34342538_1_1_1_1,00.html</a></p> <p>Please note that these are not exhaustive lists.</p>
Contact email:	<a href="mailto:edu.pisa@oecd.org">edu.pisa@oecd.org</a>