Innovation in PISA: Frequently Asked Questions (FAQs)

What are the PISA innovative domain assessments?

In addition to assessing students' literacies in reading, mathematics and science, PISA develops an innovative domain assessment for each cycle that targets a new and relevant 21st century competence. The innovative domains to-date are:

- PISA 2012 Creative Problem Solving
- PISA 2015 Collaborative Problem Solving
- PISA 2018 Global Competence
- PISA 2021 Creative Thinking
- PISA 2025 Learning in the Digital World

Learn more about any of the past, current or future innovative domain assessments.

How often are the PISA innovative domain assessments administered?

There is a new innovative domain assessment every three years, corresponding to every PISA cycle.

Why did PISA introduce an innovative domain assessment in each cycle?

One of PISA's unique features since its inception is its innovative concept of 'literacy' (defined as students' capacity to extrapolate from and apply their knowledge and skills to analyse, reason, and communicate effectively about problems in a variety of situations). Assessing important competences that students need for future success has therefore always formed an integral part of PISA's core mission. This motivation also inspired the development of the innovative domain assessments as a core component of PISA, aiming to provide a more comprehensive outlook on students' 'readiness for life' that account for key transversal, 21st century competences.

Why are the innovative domain assessments important?

For participating PISA countries

Data from the innovative domain assessments can inform policy makers about the extent to which students are equipped with the competences they need for future success, as well as how opportunities to develop those competences differ both within and across countries and economies. The robust conceptual and measurement frameworks developed for each innovative domain assessment, as well as the cognitive test and questionnaire items, can also inform countries' own national instruments for measuring 21st century competences. PISA assessments provide education stakeholders, including teachers, with an important resource for understanding, developing and assessing cross-curricular competences. National test developers can build upon the frameworks, released items, analyses and reporting methods employed by PISA to innovate national assessment systems. .

For PISA

In general, the PISA's innovative domain assessments demand students to engage in higher-order thinking skills, such as problem framing, flexibility in strategy choice, critical thinking and metacognition. Recent advances in cognitive science have also suggested that many of these skills are relevant for students' performance in PISA's core literacies. Assessing higher-order thinking skills in turn requires more sophisticated and diverse measurement instruments that go beyond the types of items traditionally used to measure factual and procedural knowledge. The innovative domain assessments represent an opportune vehicle through which to develop and validate innovative task-types, adaptive systems and new scoring solutions that are equally relevant for advancing measurement in the PISA core domains.

For researchers, scholars and experts in the field of education

The process of framework development for the innovative domain is led by interdisciplinary and international groups of experts. The frameworks thus represent a useful synthesis of current knowledge on how students develop important competences. The unique data collected by the innovative domain assessments present education researchers with an opportunity to conduct important research on students' development of 21st century competences. The PISA Database and PISA Data Explorer tool provide free, easily accessible PISA data from the innovative domain assessments to education researchers, including log-files collecting traces of students' interactions with the digital platform. The Thomas J. Alexander Fellowship Programme also provides researchers in a variety of disciplines with the opportunity to conduct quantitative, evidence-based research on PISA data (as well as other OECD knowledge base and data products) and to link that research to education policy and practice.

Does PISA collect trend information in the innovative domains?

To date, every PISA cycle since 2012 has included a 'new' innovative domain assessment. This means that there is no comprehensive trend information for any of the previous innovative domain constructs. A cross-cycle group of experts in assessment, the Research and Innovation Group, is currently reviewing the role and purpose of the PISA innovative domain assessments with a view to publishing a set of recommendations to guide the future development of the innovative domains. Part of this review is consider the value and scope for establishing trend measures for these assessments.

Whom do PISA innovative domain assessments assess?

PISA assesses students between the ages of 15 years and 3 months and 16 years and 2 months who are enrolled in an educational institution at grade 7 or higher in participating countries/economies. This age group was chosen so that students could be compared across countries/economies shortly before they are faced with decisions about major life choices, such as entering the workforce or pursuing further education. A proportion of the students who sit the PISA assessment take part in the innovative domain assessment, according to the specific test design of each cycle. You can find more information about the PISA sample and survey design on the main PISA website's Frequently Asked Questions (FAQ) page.

Who decides the focus of the PISA innovative domains?

The PISA Governing Board (PGB) is responsible of selecting the target competences of the innovative domains, from a pool of proposals prepared by the OECD Secretariat. This decision is taken in general six years before the implementation of the assessment.

How are the innovative domain assessment frameworks developed?

The development of every PISA assessment framework is an iterative and collaborative process between the PISA Secretariat and the respective Subject Matter Expert Groups (SMEGs). The SMEGs are nominated at the start of each PISA cycle and approved by the PISA Governing Board. Learn more about the experts responsible for the current development of PISA innovative domain assessments.

What is the PISA Research, Development and Innovation (RDI) Programme?

The PISA Governing Board established the Research, Development and Innovation (RDI) Programme in 2018 to coordinate PISA's innovation-oriented activities, following the recommendations of a steering group of experts (the Research and Innovation Group, RIG). The RDI Programme supports innovation in future PISA assessments by exploring the possible application in PISA of advances in cognitive sciences, educational testing methodologies and technologies. This will be accomplished in two main ways: 1) directly within the innovative domain assessments - for example, by developing measures of new and important cognitive and non-cognitive constructs, and/or employing innovative methodological and analytical approaches – and 2) by conducting exploratory research that could improve future iterations of existing assessments. This exploratory research will occur through a set of RDI projects that are approved by the countries, which include for the current biennium (2021-2022):

(1) Developing Quality Standards for PISA tests, questionnaires and data products;
(2) Increasing efficiency of assessment through multistage adaptive testing (MSAT) in PISA;
(3) Developing and validating measures of engagement; and
(4) Using process data to augment measures of student performance.