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保存年限：

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主旨：檢送我國參加OECD「國際學生能力評量計畫（PISA）2029」國家調查執行團隊計畫徵求說明書及相關附件1份，投件截止日為115年5月29日（星期五）17時30分（以送達時間為準），請協助公告並鼓勵踴躍投件，請查照。

說明：

一、本院接受教育部國民及學前教育署委託辦理OECD「國際學生能力評量計畫（PISA）2029」國家調查執行團隊徵選，合先敘明。

二、旨揭計畫徵求期程自公告日起至115年5月29日（星期五）17時30分止，請依本院函附計畫申請書與經費表格式繕打，並檢具書面一式5份及電子檔光碟1份，由機關行文提出申請。

三、PISA2029計畫執行期程自116年1月1日起至120年6月30日止，相關計畫執行重點需求與計畫審查重點，請詳閱函

國立成功大學
1159907203　115/4/1

附之計畫徵求說明書及相關附件，亦可至國際大型教育評比調查專案辦公室（網址：https://cirn.moe.edu.tw/Module/index.aspx?sid=1199）之最新消息下載。

正本：公立大專院校
副本：教育部國民及學前教育署 115/04/01 12:01:51

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PISA 2029

Programme for International Student Assessment

OECD

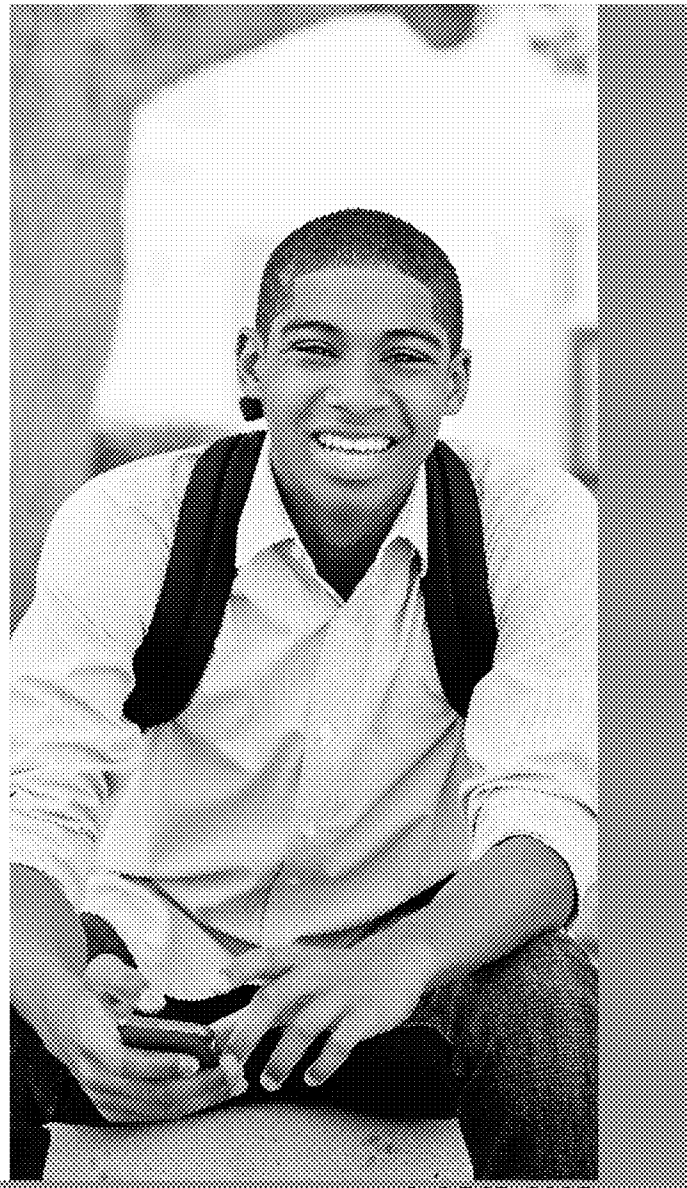
BETTER POLICIES FOR BETTER LIVES

What is PISA?

Conducted by the **Organisation for Economic Co-operation and Development (OECD)**, the **Programme for International Student Assessment** (PISA) is the largest international comparative education programme in the world. Since PISA began in **2000**, more than **100 countries and economies** have participated in the programme, including 50 middle-income countries.

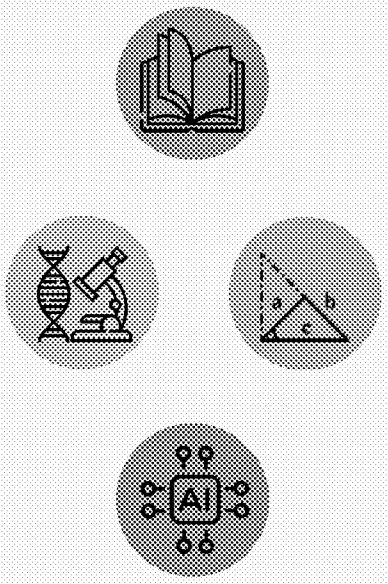
Through participation in PISA, countries become part of a global community. PISA is also one of the **primary sources of data for the United Nations** and its member states in monitoring progress towards the achievement of the Education Sustainable Development Goal by 2030.

PISA 2029 will be the **10th edition** of PISA.



15 Year olds,

Grades 7+



PISA evaluates how well students can use their knowledge and skills to tackle new challenges and practical, real-world situations

PISA tests **15-year-old students** in grades 7 and above.
Students complete a **two-hour test** in:

- reading,
- mathematics,
- science and
- an innovative domain that targets interdisciplinary skills.

For PISA 2029:

- The **focal domain** is reading
- The **innovative domain** is media and artificial intelligence literacy.

PISA shows how learning relates to **demographic, social and economic aspects**. With reliable data on gaps in access and differences in outcomes between groups of students, countries can determine whether all students are given **equal opportunities** to succeed at school and beyond.

PISA collects data on students, schools and systems:

- Students complete a 35-minute **questionnaire** on their background, well-being, learning strategies, attitudes towards reading and motivation.
- **School principals** and **system leaders** provide data on school policies, practices, resources and institutional factors that help explain performance differences.

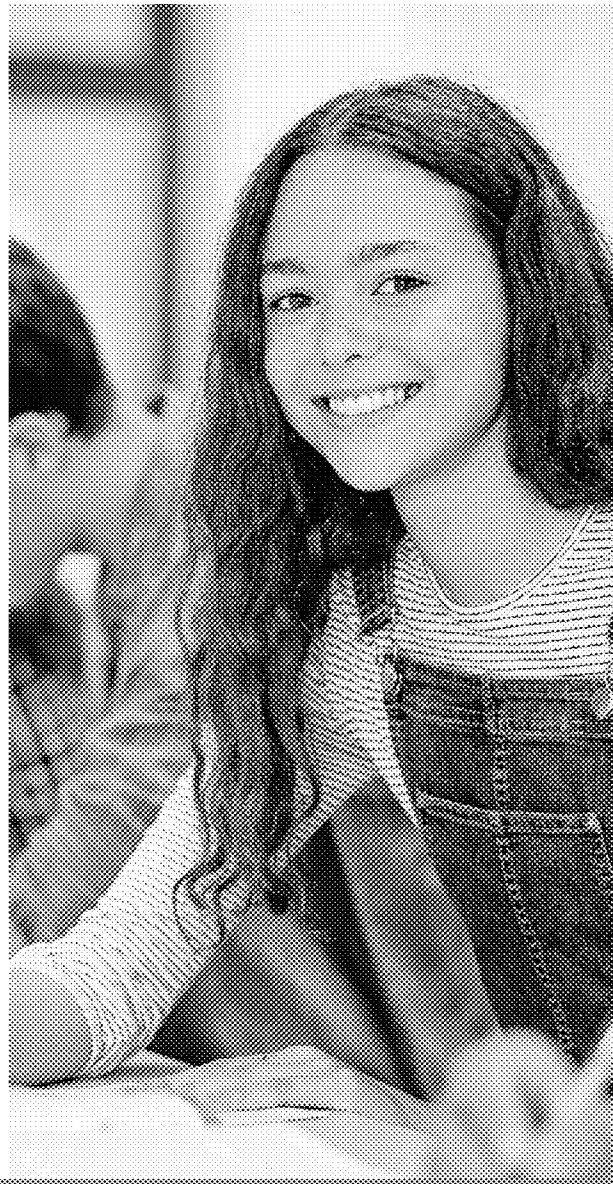
PISA adapts to different countries' needs:

- PISA is a **computer-based assessment** that is **adaptive** and appropriate for both low- and high-performing students.
- There is an **online** and **offline** version of the survey available to the students.

Benefits of participating in PISA

PISA provides:

- An **international benchmark** of learning outcomes and trend measures that enable countries to follow progress over time.
- Insights into the most efficient policies and practices from across the world, helping policy makers **gain insight** on how to help students learn better, teachers to teach better and school systems to operate more effectively.
- Valuable opportunities for **evidence-based peer-learning** through international comparison, analysis and the sharing of policy experiences.
- Information on how much and in what ways **resources** are spent on education and how this relates to learning outcomes and for achieving equity.
- A rich **database and international reports** that can help countries to identify the strengths and weaknesses of their education systems, refine policy priorities and set new goals for improvement.



Some country experiences of PISA

Brazil

Participation in PISA provided Brazil with valuable data on student performance, informing policies aimed at reducing educational disparities and improving overall educational quality. The insights gained have been instrumental in shaping strategies to enhance learning outcomes.

Germany

The first PISA survey in 2000 set a baseline for subsequent major education reforms to promote equity, including the introduction of national standards and targeted support for disadvantaged students. This helped to achieve improved student outcomes in terms of quality and equity by 2009.

Colombia

Colombia used PISA to better understand their educational shortcomings and initiated reforms that led to measurable improvements, demonstrating that even lower-income nations can benefit from international benchmarking.

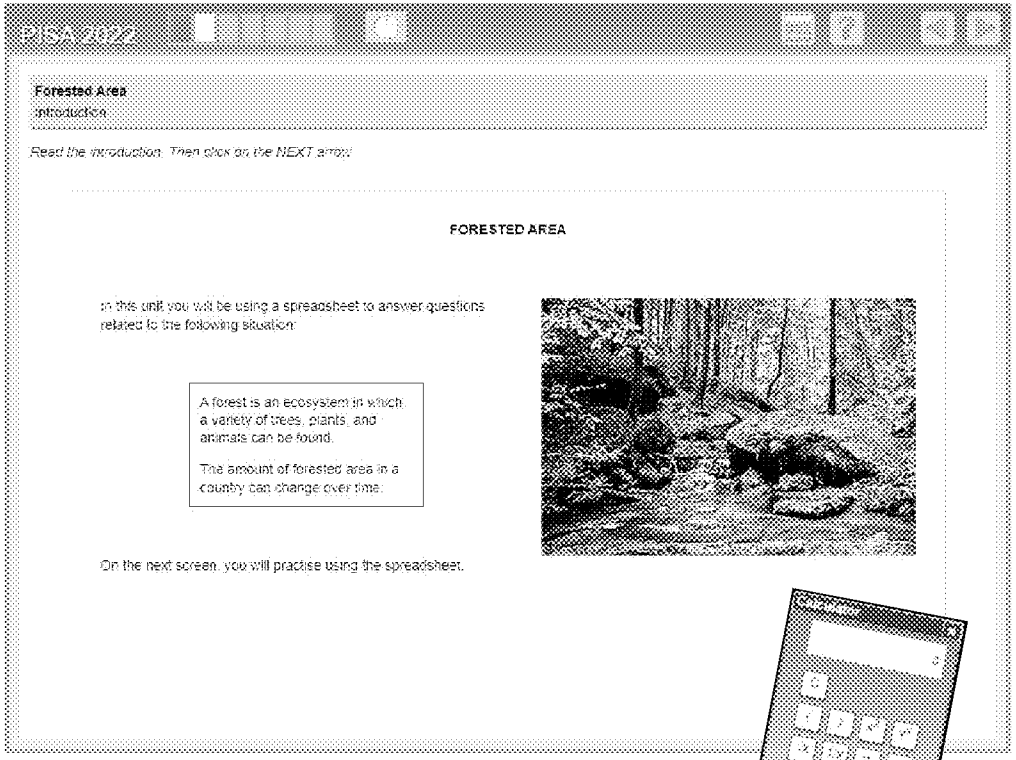
Poland

PISA insights spurred a major school reform in Poland, which reduced performance disparities between schools and significantly raised overall student achievement—equivalent to more than half a school year's learning gain.

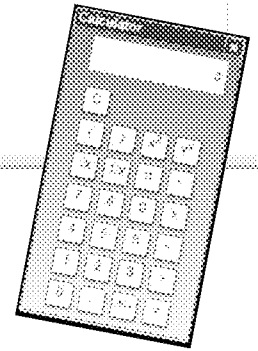
Korea

Concerned about a narrow elite dominating top PISA results, Korea implemented education reforms that doubled its share of top-performing students within a decade, proving that high performance can be inclusive.

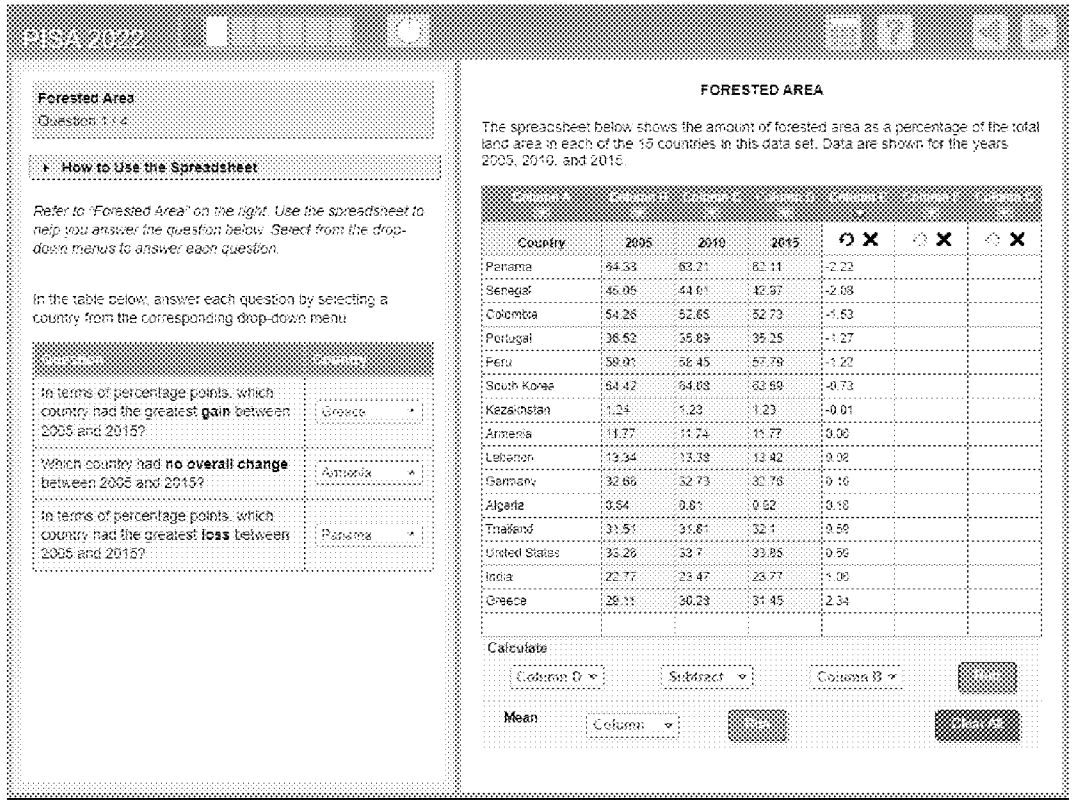
PISA item examples



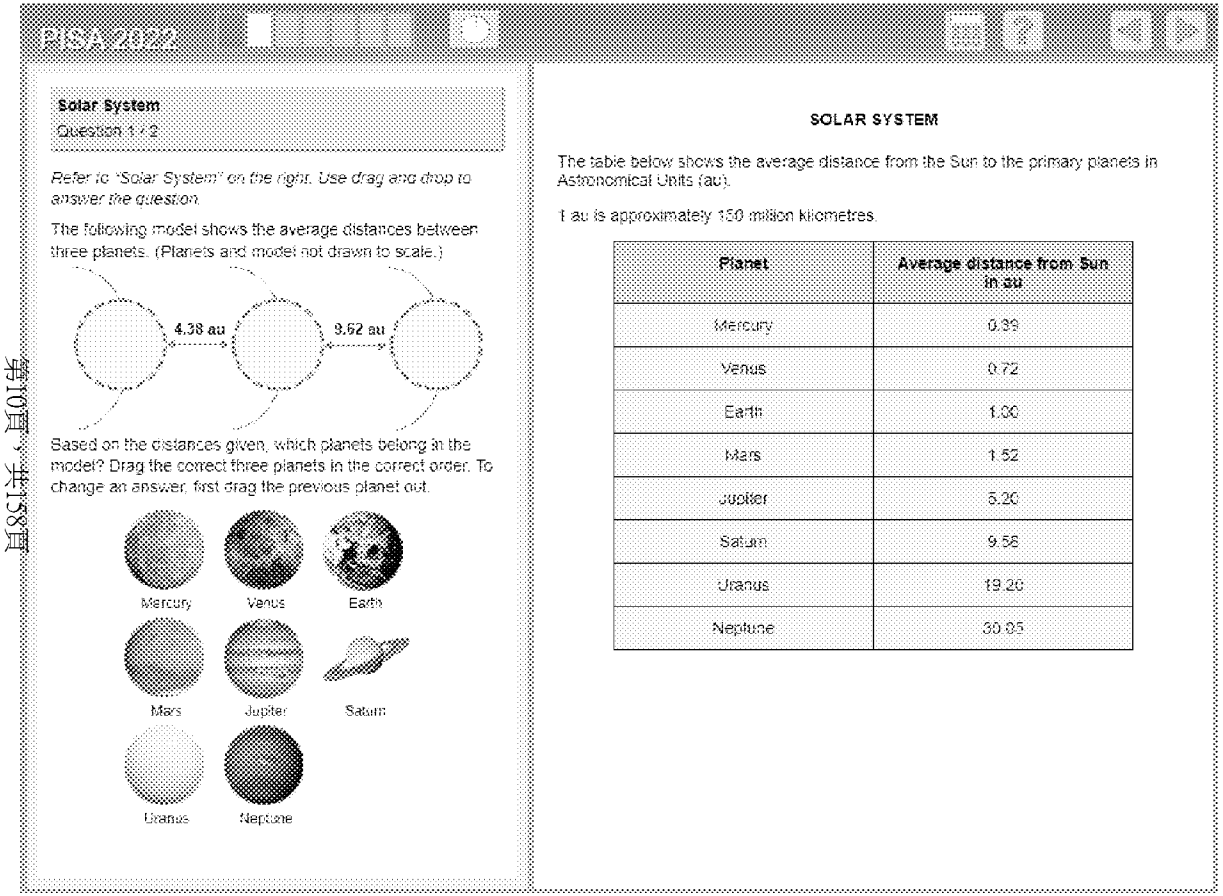
Calculator and “Help” buttons are available to students at the top of each screen if needed.



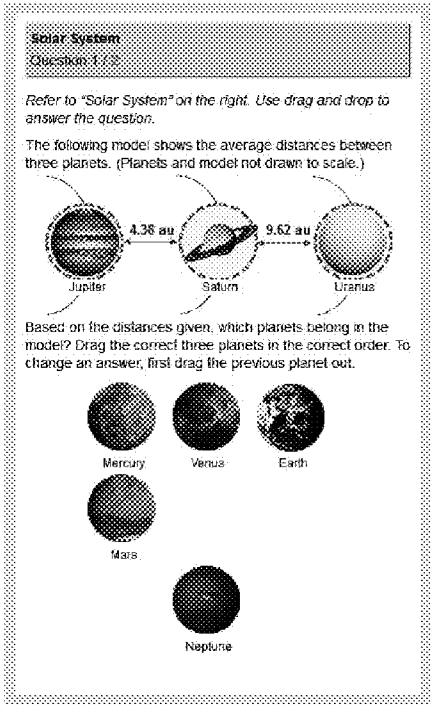
Students need to determine what calculation(s) to perform, how to use the spreadsheet to perform them, and lastly interpret the results with respect to the context.



PISA item examples



Below is an image of what the question stem and response area look like after the student has dragged-and-dropped the planets into their respective locations in the model.



For more PISA items, please consult our website: https://www.oecd.org/en/about/programmes/pisa/pisa-test.html

PISA is relevant for all countries

PISA caters to a large and diverse set of countries, including a growing number of low- and middle-income countries. The PISA cognitive test instruments are **adapted to different contexts** to provide countries with more relevant data on their students.

In PISA, the test items given to each student are **dynamically determined**, based on how the student performed in prior stages of the test. PISA's **adaptive testing** allows for a more accurate measurement of student performance by asking students questions that are better suited to their ability.

The **background questionnaires** are adapted to better reflect the context of students in a wider range of countries.

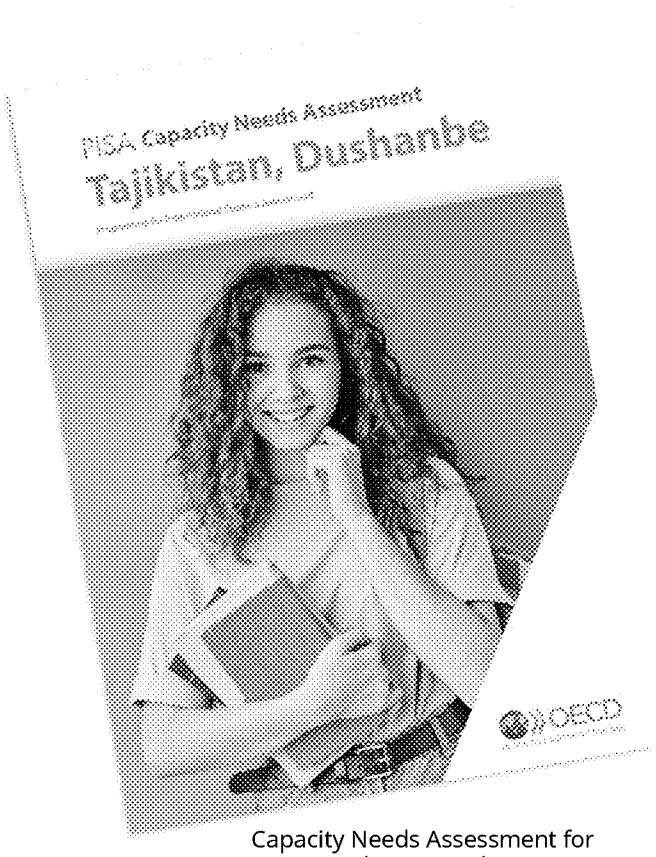
To facilitate greater access to PISA, the OECD has developed **partnership options**, which are available to provide specific support for countries that join for the first time. These partnership options help to build country capacity to both implement PISA successfully and make the fullest use of the data.

Albania
Algeria
Argentina
Armenia
Australia
Austria
Azerbaijan
Belarus
Belgium
Bosnia and Herzegovina
Brazil
Brunei Darussalam
Bulgaria
Cambodia
Canada
Chile
China
Chinese Taipei
Colombia
Costa Rica
Croatia
Czechia
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Estonia
Finland
France
Georgia
Germany
Ghana
Greece
Guatemala
Honduras
Hong Kong (China)
Hungary
Iceland
India
Indonesia
Ireland
Israel
Italy
Jamaica
Japan
Jordan
Kazakhstan
Kenya
Korea
Kosovo
Kurdistan Region (Iraq)
Kyrgyzstan
Latvia
Lebanon
Lithuania
Luxembourg
Macao (China)
Malaysia
Malta
Mauritius
Mexico
Moldova
Mongolia
Montenegro
Morocco
Netherlands
New Zealand
North Macedonia
Norway
Palestinian Authority
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Qatar
Romania
Russian Federation
Rwanda
Saudi Arabia
Senegal
Serbia
Singapore
Slovak Republic
Slovenia
Spain
Sweden
Switzerland
Tajikistan
Thailand
Trinidad & Tobago
Tunisia
Türkiye
Ukraine
United Arab Emirates
United Kingdom
United States
Uruguay
Uzbekistan
Venezuela
Viet Nam
Zambia

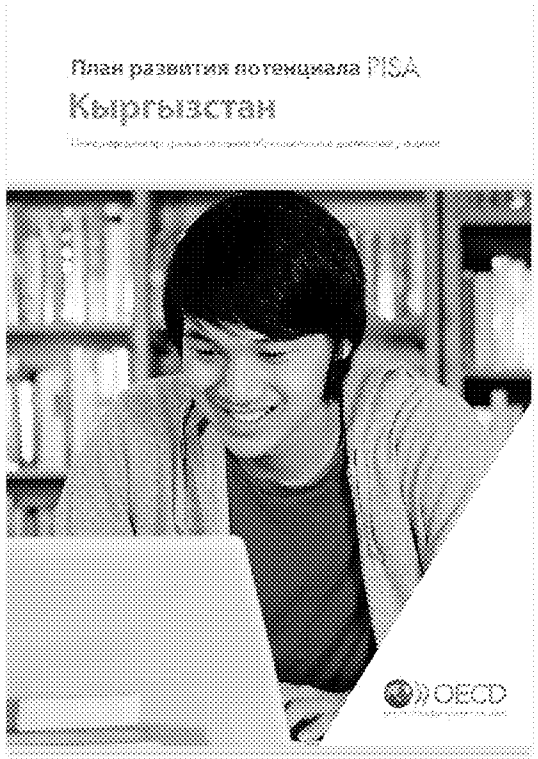
PISA participants

For more information about years of participation and national coverage, please consult our website:
https://www.oecd.org/en/about/programmes/pisa/pisa-participants.html

Partnership options



Capacity Needs Assessment for Tajikistan (Dushanbe)



Capacity Building Plan for Kyrgyzstan

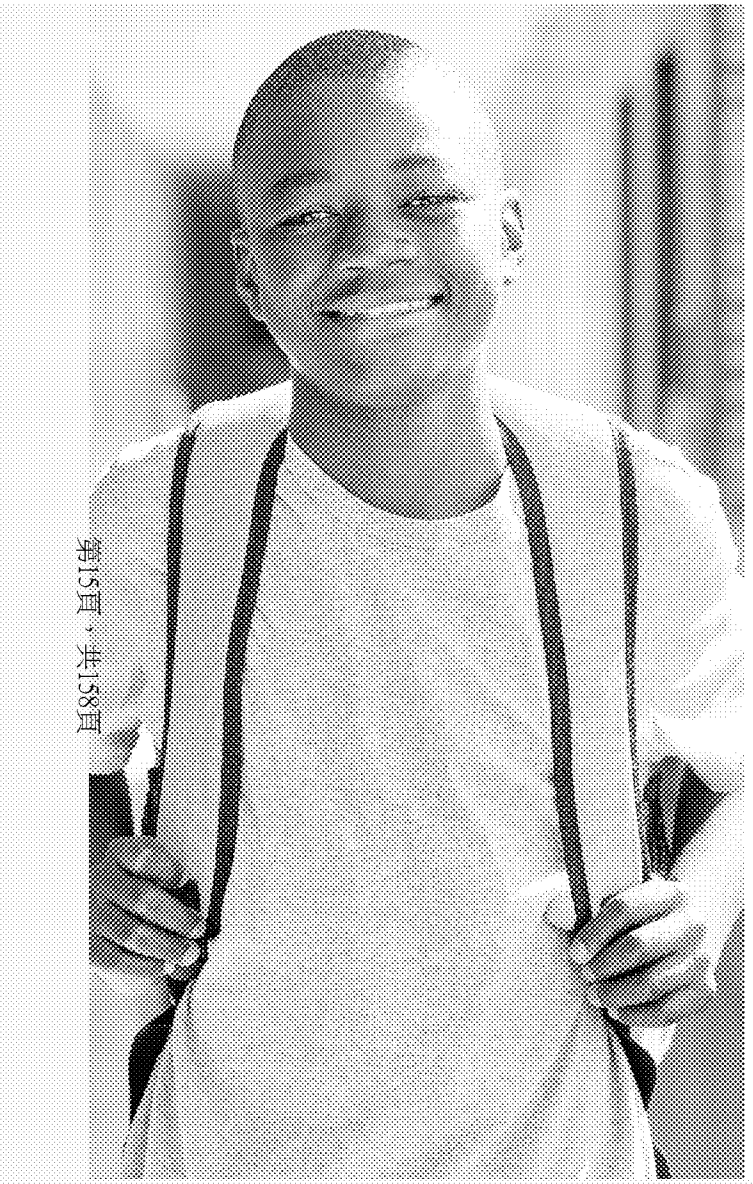
National PISA 2022 Report for Ukraine

PISA 2029 offers two partnership options for countries that participate in PISA:

Capacity Building and Implementation Support (CBIS)

Analysis and Reporting (A&R)

The partnership options are aimed at maximising the benefits of participation in PISA.



Capacity Building and Implementation Support

This partnership option offers an optimal level of support to ensure the successful implementation of PISA according to the assessment's technical standards and timeline, and to build national capacity for implementing future international and national large-scale assessments.

Countries that participate in this partnership option will collaborate with the OECD on:

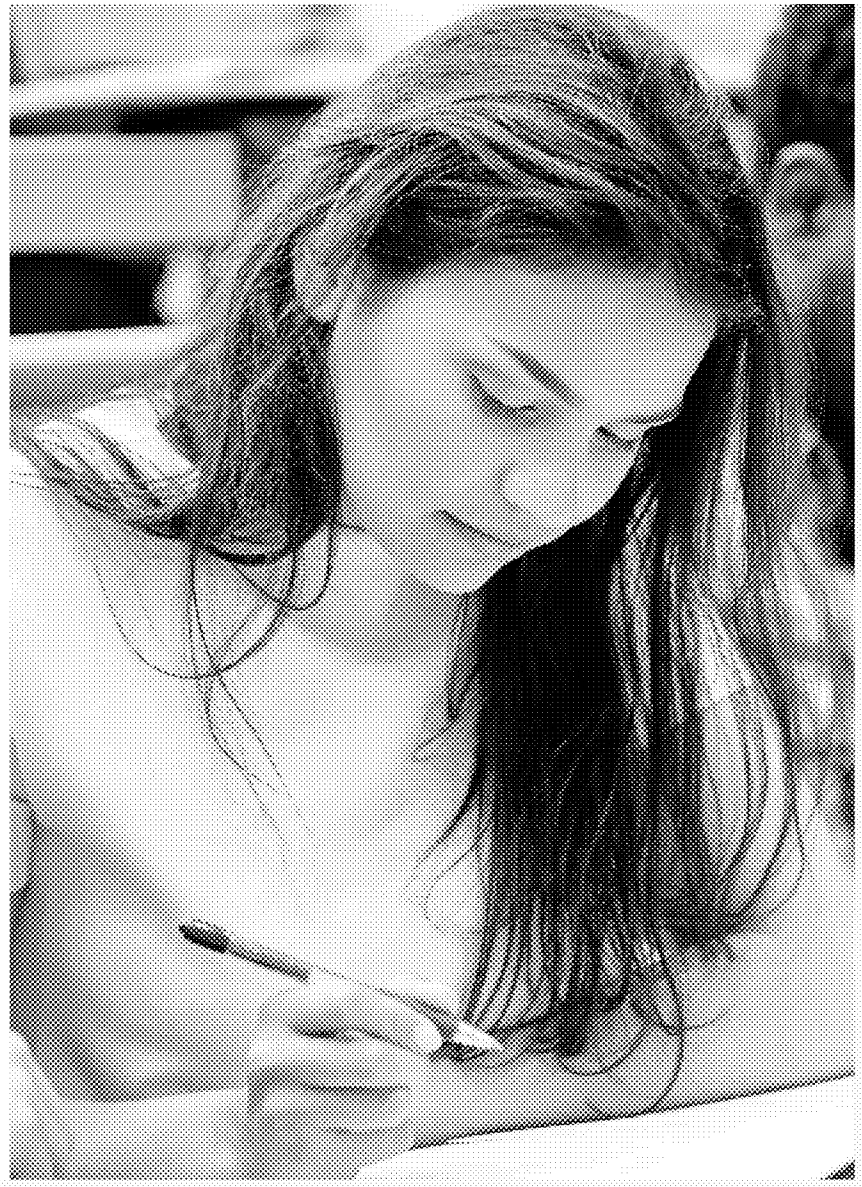
A **capacity needs survey** including a country visit by PISA specialists to assess and engage the participating country's capacity to implement PISA and target support where there are gaps.

Planning and preparation activities, resources and tools, including determining the financial and human resources needed in the national context and mitigating risks.

A dedicated **liaison officer** in OECD's international contractor team to support the participating country.

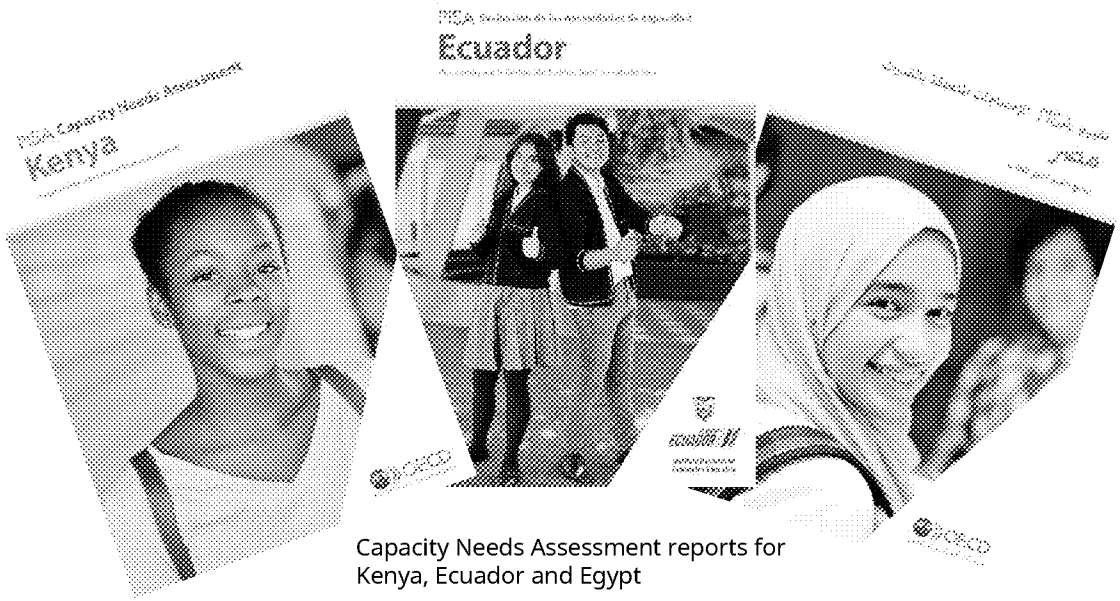
Meetings, workshops and consultations to support PISA implementation and solve any problems that may arise.

Invitation of the experienced staff from previous participating countries in PISA, referred to as peers, to contribute to supporting first time participants as **peer-to-peer learning** resources.



Country experience with CBIS

19 countries and economies have benefited from the Capacity Building and Implementation Support partnership option in PISA for Development, PISA 2018, PISA 2022 and PISA 2025.



Capacity Needs Assessment reports for Kenya, Ecuador and Egypt

Armenia
Cambodia
Ecuador
Egypt
El Salvador
Guatemala
Honduras
Kenya
Kurdistan Region (Iraq)
Kyrgyzstan
Mongolia
Panama
Paraguay
Rwanda
Senegal
Tajikistan
Ukraine
Uzbekistan
Zambia

Country feedback on CBIS

> Since 2023, the CBIS journey has kept the Kenyan team enthusiastically engaged and empowered. Simple, concise, and practical sessions have enabled the team to adhere to the technical standards and learn what counts when collecting quality data even when country contexts differ.
>
> *– Epha Ngota, Kenya*

> CBIS was the best decision Kyrgyzstan could make when we decided to participate in PISA 2025. As a new participant there were many unknown areas, procedures and study peculiarities that we could have missed, but were able to catch up on time thanks to the support and guidance that was provided by the CBIS team.
>
> *– Onolkan Umankulova, Kyrgyzstan*

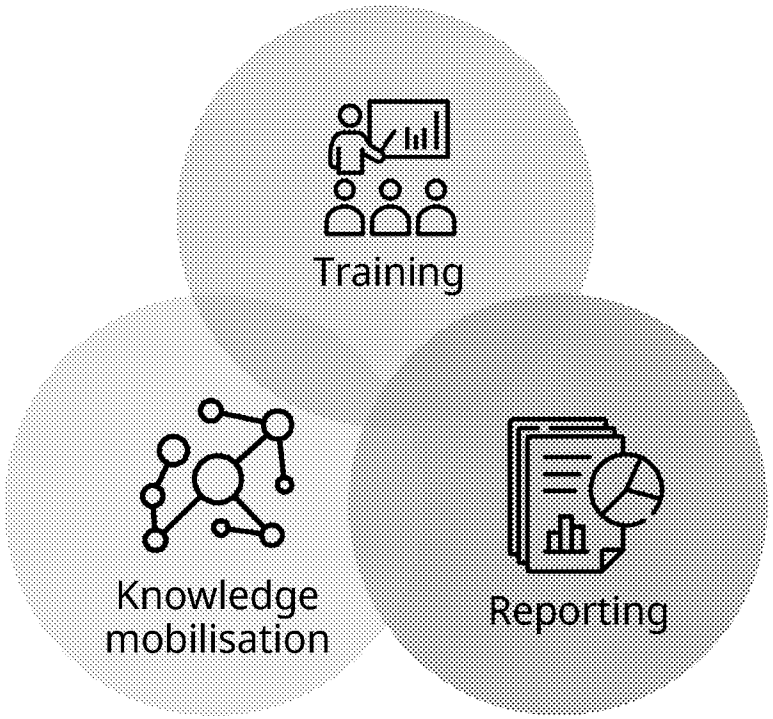
> Participating in the CBIS partnership has been a highly valuable experience for Egypt. It provided us with a structured and well-supported pathway to enhance our work in PISA, align more closely with PISA standards, and build internal capacity at every stage.
>
> *– Khaled Mohamed Sayed, Egypt*

Analysis and Reporting

The Analysis and Reporting partnership (A&R) supports participating countries in building national capacity for PISA **analysis, interpretation and reporting** to inform quality evidence-based education policy debates and reforms.

Countries that participate in this option will collaborate with the OECD on:

- **Training a national team** on how to access, manage, analyse and interpret PISA 2029 data
- Developing a national **knowledge mobilisation and dissemination strategy** to promote the use of PISA evidence in support of national policy priorities
- Organising a **PISA promotion event** with the participation of the OECD to prepare stakeholders for the PISA results
- Producing a **PISA 2029 national report** with relevant analysis for the national context
- Organising a **national PISA 2029 launch event** with participation of OECD experts to present the results of the national report



What to expect from your country's participation in PISA A&R

Training

- Online training
- In-person practical training

Reporting

- Review and feedback on the national PISA report
- Key messaging workshop

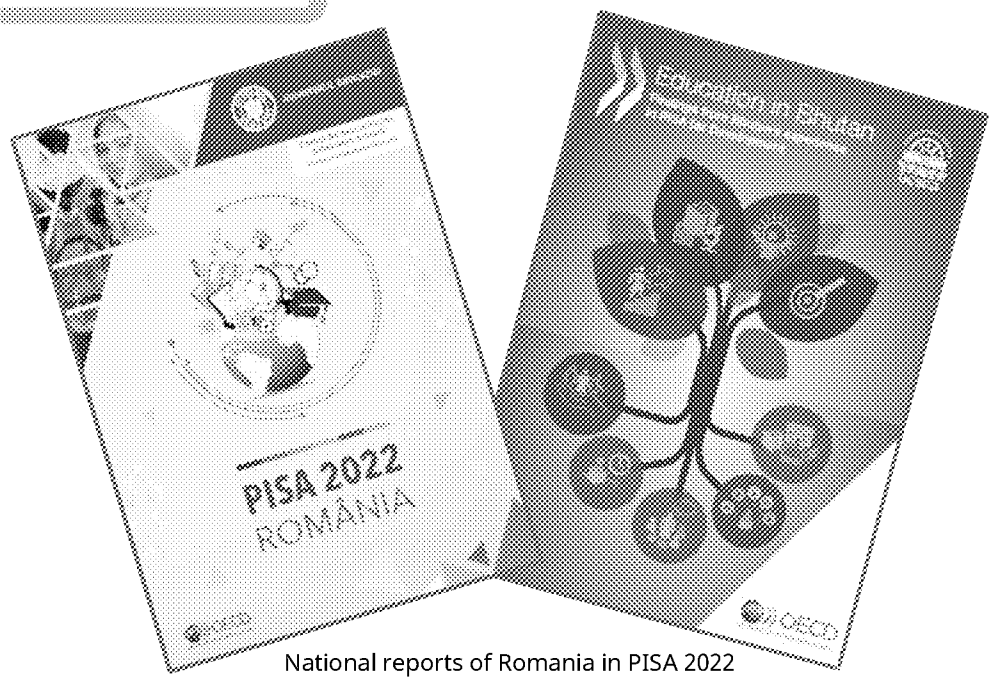
PISA Knowledge Mobilisation and Dissemination

- Initial PISA promotion event
- Knowledge mobilisation and dissemination strategy
- Launch of the PISA 2029 findings

Country experience in A&R

27 countries and economies have taken up the A&R partnership option in PISA or PISA for Development since 2018.

Albania
Armenia
Bhutan
Bosnia and Herzegovina
Cambodia
Ecuador
Kenya
Egypt
El Salvador
Guatemala
Honduras
Indonesia
Jamaica
Kurdistan Region (Iraq)
Moldova
Mongolia
Panama
Paraguay
Philippines
Romania
Rwanda
Senegal
Serbia
Tajikistan
Ukraine
Uzbekistan
Zambia



National reports of Romania in PISA 2022 and of Bhutan in PISA for Development

Country feedback on A&R

The Analysis and Reporting partnership is an extremely valuable professional experience that helped to strengthen the analytical team in Ukraine. Working directly with the OECD experts provided deeper insights into the data as well as a better understanding of some findings and a vaster view on the policies applicable to certain situations.

– Tetiana Vakulenko, Ukraine

The A&R programme exceeded my expectations. I was able to finalise the drafting of the national report, met some wonderful people and gained experience working within a multicultural international organization. In particular, the experts in charge of the PISA international reports were always open to share their knowledge and experience.

– Mario Rivera, El Salvador

PISA A&R is well-organised and planned, which is important for those who are new to PISA analysis. I really appreciated the OECD's support in each step of the development of our PISA 2022 national report and in the preparation of the national launch event for PISA 2022.

– Kodir Karimberdiyev, Uzbekistan

The PISA Analysis and Reporting option allowed me to learn how to do analysis of large-scale assessments in my country, such as analysis of PISA and TIMSS data. Using what I learned, I now prepare and analyse data similar to the PISA data as part of my current work.

– Zaneta Dzumhur, Bosnia and Herzegovina

PISA 2029 timeline

2026 Signature of the participation agreement with the OECD

2026 Establish national team for PISA

2027 Translation and adaptation of instruments into national version

2028 Field Trial pre-test in all participating countries

2029 Main Survey data collection in all participating countries

2030 Data analysis, report production and publication of results

Join us in shaping the future of education

Please contact PISA at **EDU.Pisa@oecd.org** to discuss your participation by **28 February 2026**.
The agreement for PISA 2029 should be reviewed and signed in **mid-2026.**

Country participation cost for PISA 2029 (new participant): 234 000 EUR

In addition to the participation cost, the partnership option costs are:

- **Capacity Building and Implementation Support**: 192 000 EUR
- **Support for Analysis and Reporting:** 220 000 EUR*

The fees are payable in instalments over three years: 2027, 2028 and 2029.

In-country costs are approximately 350 000 EUR but depend on the country's cost of living. They include the costs of preparing PISA instruments, administering PISA's field trial and main survey, as well as attending PISA's international meetings and training events.

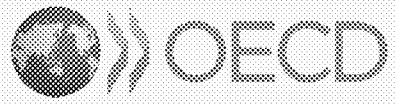
> I invite countries that are interested in becoming part of a global community of education systems to contact us now.
>
> Andreas Schleicher
> OECD Director of Education and Skills

*Subject to minimum five countries participating

Notes

PISA is organised by the Organisation for Economic Co-operation and Development (OECD). The OECD is an international organisation that works to build better policies for better lives. We draw on more than 60 years of experience and insights to shape policies that foster prosperity and opportunity, underpinned by equality and well-being.

We work closely with policy makers, stakeholders and citizens to establish evidence-based international standards and to find solutions to social, economic and environmental challenges. From improving economic performance and strengthening policies to fight climate change to bolstering education and fighting international tax evasion, the OECD is a unique forum and knowledge hub for data, analysis and best practices in public policy. Our core aim is to set international standards and support their implementation – and help countries forge a path towards stronger, fairer and cleaner societies.



Organisation for Economic Co-operation and Development

EDU/PISA/GB(2026)1

For Official Use English text only

17 March 2026

DIRECTORATE FOR EDUCATION AND SKILLS
PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT

Governing Board

FIRST DRAFT PISA 2029 TECHNICAL STANDARDS

Technical session of the 61st meeting of the PISA Governing Board

7 April 2026
Brasília, Brazil

This document is intended for the PGB's technical session on 7 April 2026.

The document presents a first draft proposal of the Technical Standards for PISA 2029. It is informed by the sampling innovations and considerations presented in the accompanying document [EDU/PISA/GB(2026)2]. Certain elements of the survey design regarding accessibility are under development and will be incorporated in the final version.

The document will be revised after the 61st PGB meeting based on the PGB's feedback and a review by PISA's Technical Advisory Group. A final draft for the PGB's approval will then be presented at the 62nd PGB meeting in October 2026.

Participants of the technical session of the 61st PGB meeting are invited to:

- **DISCUSS** and **PROVIDE FEEDBACK** to the first draft Technical Standards for PISA 2029 at the optional technical session of the 61st PGB meeting on 7 April 2026.

Andreas Schleicher, Director for Education and Skills and Special Advisor on Education Policy to OECD's Secretary-General (andreas.schleicher@oecd.org)

JT03583160

Table of contents

First Draft PISA 2029 Technical Standards

Introduction

Purpose and scope

1. The PISA Technical Standards set out the principles that govern the implementation of the OECD Programme for International Student Assessment (PISA). They ensure consistency across participating entities and form a core component of PISA's quality assurance processes. The purpose of PISA is to generate an international dataset of a quality to support valid cross-national inferences. Adherence to the standards outlined in this document is essential to achieving this objective.

2. The standards in this document apply to data from *adjudicated entities*[1] including both participating entities and additional adjudicated entities managed by participating entities. The PISA Governing Board will approve the list of adjudicated entities included in each PISA cycle. The standards define expected levels of attainment, while timelines and feedback schedules of the *adjudicated entities* and the international contractors are defined in the PISA Operations Manuals[2] and in the Workflows in *PISA Connect*.

3. This document provides key definitions as footnotes to support comprehension and facilitate smooth reading. The glossary is also provided at the end of the document.

4. This draft document is a revision of the Technical Standards for PISA 2025. The *Reader's Guide to the draft PISA 2029 Technical Standards* [EDU/PISA/GB(2026)2] describes the changes for the PISA 2029 Technical Standards.

Intended audience

5. This document serves as a reference for national centres responsible for implementing PISA within participating entities, as well for the international contractors commissioned by OECD to support the central implementation of the tenth cycle of PISA[3].

Quality dimensions and objectives

6. This document sets out the technical standards for PISA 2029. Four key dimensions underpin the data quality in PISA: consistency, precision, generalisability, and timeliness. The standards identify how these quality objectives are to be achieved and support national centres and international contractors to meeting PISA 2029 timelines.

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[1] *Adjudicated entity* – a country, geographic region, or similarly defined population, for which the international contractors fully implement quality assurance and quality control mechanisms and endorse, or otherwise, the publication of separate PISA results. A PISA participant may manage more than one adjudicated entity.

[2] *PISA Operations Manuals* – all manuals provided by the international contractors. The preparation of the PISA operations manuals will be carried out by the international contractors and will describe procedures developed by the international contractors. The manuals will be prepared following consultation with participating entities, the OECD Secretariat, the Technical Advisory Group (TAG) and other stakeholders.

[3] See more about managing structures of PISA in Section 1.

7. *Consistency* refers to equivalent data collection across all participating entities (countries/economies). Data should be collected using the same assessment materials, translated with the highest possible degree of *linguistic equivalence*[4] and/or adapted as appropriate. Comparable samples of the student population in each participating should be assessed under test conditions that are as similar as possible. When data collection is consistent and response rates sufficiently high, differences in test results across participating entities are expected to reflect actual differences in student performance rather than methodological or procedural factors unrelated to performance.

8. *Precision*: all processes used in PISA 2029 should minimise the risk of undesired variation or error. Both systematic and random errors must be minimised as much as possible. Greater precision enhances data quality, supports more powerful statistical analyses, and leads to more reliable and trustworthy results.

9. *Generalisability*: PISA is based on a sample of students rather than complete populations. It is essential that samples accurately represent the target population. In addition, test and questionnaire materials must be developed in a way that will ensure findings are not limited to the specific setting in which the data are collected, but are valid across a wide range of contexts and applicable to the target population as a whole. Together with consistency, generalisability enables valid cross-participating entity comparisons.

10. *Timeliness*: PISA is a large-scale and complex programme operating under tight timelines and budget constraints. Given the large number of participating entities, it is not feasible to develop and later harmonise local solutions. Therefore, the standards specify a clear and common pathway for data collection, coding and data submission.

Quality assurance and accountability

11. This document establishes a shared framework of mutual accountability between participating entities and the international contractors. It defines each standard and describes how compliance is assured. Quality assurance refers to the process through which PISA 2029 activities are monitored and guided to ensure that the programme meets its intended objectives.

Data adjudication and inclusion

12. Where standards have been fully met and data quality of the final databases is judged as appropriate, the PISA Adjudication Group formed by the Technical Advisory Group (TAG) and the Sampling Referee will recommend to the OECD Secretariat that the data be included in the PISA 2029 database. Where standards have not been fully met or data quality raises concerns, the adjudication process will assess the extent to which data quality or international comparability may have been affected, and whether additional analyses or evidence are necessary. The outcome of this process will determine whether the data are recommended for inclusion in the PISA 2029 dataset.

[4] *Linguistic equivalence*: For assessment instruments, linguistic equivalence refers to (i) semantic congruence; (ii) same quantity and quality of information; (iii) similar register; (iv) replicated reference chains, matches and patterns. For questionnaires, linguistic equivalence corresponds to the shorthand "Ask the Same Question".

Adjudication process

13. During adjudication, the OECD Secretariat and the PISA Adjudication Group evaluate data from each participating entity against all standards collectively. This process takes into account circumstances beyond the control of national centres, such as national strikes or emergencies. Where agreement cannot be reached between National Project Managers and the OECD, the PISA Governing Board will take the final decision on the inclusion of national data in the international database.

Status of the Technical Standards

14. The PISA 2029 Technical Standards represent benchmarks of best practice. They inform PISA 2029 participating entities and international contractors of expectations and will be endorsed by the PISA Governing Board. The international contractors will support and monitor implementation. When the international contractors identify issues, they will contact the relevant national centre promptly and provide support to them where possible.

1. Management Structures

15. **Rationale**: PISA management structures are established to ensure the effective and smooth conduct of all PISA operations. They set benchmarks for best practice and ensure the creation and analysis of an international dataset of a high quality that allows for valid cross-national inferences.

1.1. PISA Governing Board (PGB)

Standard 1.1 Participating entities with full membership status in PISA (currently the 38 OECD countries, plus Brazil and Thailand) are responsible for PISA at the policy level. Through the PGB, they determine PISA's policy priorities and oversee adherence to these priorities during its implementation. The PGB determines policy objectives, establishes priorities for indicator development and reporting, and specifies the scope of work. The PGB also works with the OECD Secretariat to ensure compliance with objectives, milestones and study parameters.

1.2. The OECD Secretariat

Standard 1.2 The OECD Secretariat is responsible for PISA's overall management, serving as the Secretariat of the PGB and as the interface between the PGB and the international contractors. It monitors the project implementation and facilitates consensus among participating entities on policy issues through the PGB. In collaboration with participating entities, the OECD Secretariat produces indicators and analyses and prepares the international reports.

1.3. Advisory Groups

Standard 1.3 Various expert groups are established to provide substantive and technical advice on specific aspects of PISA.

- **Technical Advisory Group (TAG)**: Provides advice on the technical features of the assessment, including scaling and sampling methodologies, and contributes to ensuring the technical quality and integrity of the data.
- **Subject Matter Expert Groups (SMEGs)** and **Questionnaire Expert Group (QEG)**: Responsible for linking the policy objectives identified by the PGB with expertise in the relevant area. These groups facilitate consensus on content and technical issues raised by participating entities within the broader framework and objectives of the overall implementation strategy as well as providing subject-matter expertise to guide instrument development and review.

1.4. International Contractors

Standard 1.4 The international contractors for PISA 2029 are:

- Core A – Australian Council *for* Educational Research (ACER), in cooperation with cApStAn[5] and HallStat[6], is the contractor for design, development and implementation and will play a key role in PISA 2029 with responsibility for the development and implementation of large parts of the survey and is the contractor which, in close co-operation with the OECD Secretariat, will manage and co-ordinate the work across all core contractors.
- Core B – ACER is the contractor for the instrument development and implementation of the innovative domain, Media and Artificial Intelligence Literacy (MAIL).
- Core C – International Association for the Evaluation of Educational Achievement (IEA) is the international contractor responsible for coordinating the implementation of all sampling-related activities in PISA 2029.

As specified in the contracts for the implementation of the tenth cycle of the OECD Programme for International Student Assessment, the international contractors take responsibility for developing and implementing procedures for assuring data quality.

1.5. National Centres

Standard 1.5 Each participating entity should establish a national centre[7] and register all national centre team members to the *PISA Connect*[8] .

[5] cApStAn is responsible for linguistic quality control.

[6] HallStat provides expert judgement on translation quality.

1.6. Documentation Required for Quality Assurance of Management Structures

- Monitoring by the participating national centres (via the OECD Secretariat) of the adherence to the standards by all international contractors[9].
- Mediation and monitoring of the national centres' activities specified in this document by the international contractors.

2. Communication protocols

16. **Rationale**: Given the project's tight schedule, delays in communication between the national centres and the international contractors should be minimised. Therefore, national centres require continuous access to the various resources provided by the contractors. The Workflow section of PISA Connect specifies response timelines and feedback schedules for the national centres and the international contractors.

2.1. Communication with the PISA Governing Board

Standard 2.1 The international contractors report to the PGB through the OECD Secretariat and implement the project on the PGB's behalf under the Secretariat's direction.

The international contractors do not have a direct relationship or direct communication with the PGB, except where they are explicitly invited by the OECD Secretariat or the PGB to do so.

NPMs are kept informed of relevant developments in the PGB through their national PGB representative. If NPMs wish to access PGB documents or to have matters officially addressed at the PGB meeting on behalf of their participating entity, they must be raised with their national PGB representative, and not the international contractors.

[7] The details about national centres and their functions are provided in the National Project Manager (NPM) Manual.

[8] PISA Connect is the project website for PISA 2029 and is maintained by the Core A Contractor. It is the main channel for communication between the international contractors and participating national centres.

[9] The OECD will also adjudicate any issues resulting from non-compliance with the technical standards that cannot be resolved between participating entities and the international contractors.

2.2. Communication with Subject Matter Expert Groups and the Questionnaire Expert Group

Standard 2.2 The international contractors are responsible for convening the Subject Matter Expert Groups and the Questionnaire Expert Group. This includes providing information to expert group members and planning the expert group meetings. Information from national centres that is forwarded to expert groups includes national item reviews and responses collected through the National Centre Feedback Surveys. Where appropriate, the international contractors also forward ad hoc advice and comments received from national centres.

2.3. Communication with the Technical Advisory Group

Standard 2.3 The OECD Secretariat is responsible for all aspects related to the Technical Advisory Group and its meetings.

2.4. Communication with the National Centres

Standard 2.4 The international contractors ensure that suitably qualified staff are available to respond, in English, to requests by the national centres during all stages of the project. The qualified staff must:

- be authorised to respond to national centre queries
- acknowledge receipt of all national centre queries within one working day
- respond to all queries, including coder queries, from national centres within three working days, or, where a response cannot be provided within this timeframe, provide an estimated timeframe for resolution.

2.5. National Centres' Communication with the International Contractors

Standard 2.5 The National centre must ensure that suitably qualified staff are available to respond to requests from the international contractors during all stages of the project. The qualified staff must:

- be authorised to respond to queries
- be able to communicate in English
- acknowledge receipt of queries within one working day
- respond to queries from the international contractors within three working days, or, where a response cannot be provided within this timeframe, provide an estimated timeframe for response.

2.6. National Centres' Communication with Participating Schools

Standard 2.6 High levels of student and school participation are essential to the success of PISA. National centres are strongly encouraged to prepare communication materials for participating schools and students to raise awareness of PISA, explain what participation involves, encourage engagement in the assessment. These materials may include general information about the assessment and what students and schools can expect on the test day. To assist with this, the OECD will provide a set of released PISA test items for this purpose. The inclusion of released test items in informational materials may help familiarise students with the format of the assessment, reduce potential test anxiety, and allow them to focus on the subject matter during the test.

No PISA test items can be disclosed to participating institutions or to students prior to administration. Only the released test items provided by the OECD may be disclosed.

2.7. Communication with the General Public

Standard 2.7 *PISA Connect*, the PISA 2029 project website, maintained by the Core A contractor, ACER, is restricted to national centre use only due to the confidential nature of its materials. Public materials are available through the OECD PISA website at http://www.oecd.org/pisa. International contractors do not engage directly with the general public, except with the express permission of the OECD Secretariat. All public-facing information is communicated through the OECD or through national centres.

While national centres are expected to actively engage with the general public, particularly with the education communities within their participating entities, they can only use PISA information already authorised and released by the OECD for public use. It is essential that all embargoes on project information and data are strictly respected. National centres develop appropriate mechanisms to promote participation, effective implementation, and support the dissemination of results amongst all relevant national stakeholders.

3. Participation and Timelines

17. **Rationale**: Attendance at National Project Managers and training meetings is required as these represent a key component of participating in PISA. Important information is shared and discussed at these meetings. Training focuses on data management, sampling, translation/adaptation, assessment delivery platform, and cognitive and occupation coding. The in-person meetings also allow for individual consultation and communication with the international contractors, which is often very helpful.

18. To meet the requirements of the work programme, and to progress according to the timelines of the project, the international contractors will need to be notified on time

about *national options*[10] *and international optional modules*[11] in which each national centre is going to participate. For the same reason, the international contractors will need to receive all relevant materials on time to enable the preparation and implementation of these options.

19. After all options are *agreed upon* and all preparatory documentation is submitted, the national centres must participate in the Field Trial, which gives participating entities the opportunity to try out the logistics of their test procedures and allows the international contractors to make detailed analyses of the *items* so that only suitable ones are included in the Main Survey.

3.1. Frequency and Length of the International Meetings and Training Sessions

Standard 3.1 Three National Project Manager meetings are planned for the PISA 2029 cycle. These meetings will be held in person and will typically range from 3 to 5 days in duration.

A coder training meeting for Reading will be conducted in person for the Field Trial, lasting 3 to 5 days, and online for the Main Survey.

Coder training meetings for all domains, including the innovative domain, MAIL, will be delivered online for the Main Survey.

All other training sessions will either be incorporated into National Project Manager meetings or delivered online.

3.2. Meeting and Training Session Attendance

Standard 3.2 Representatives from each national centre must attend all PISA international meetings, including National Project Manager meetings, coder training

[10] A *national option* occurs if:

a) a national centre administers any additional instrumentation, for example a test or questionnaire, to schools or students that are part of the PISA international sample. Note that in the case of adding items to the questionnaires, an addition of five or more items to either the school questionnaire or the student questionnaire is regarded as a national option; or

b) a national centre administers any PISA international instrumentation to any students or schools that are not part of an international PISA sample (age-based or grade based) and therefore will not be included in the respective PISA international database; or

c) a national centre administers any PISA optional module only in some, not all, jurisdictions. The participating entity will in this case sign up for the optional module with the OECD, as if it was administered in the entire jurisdiction, and the additional work involved with administering the optional module to part of the jurisdiction only is considered a national option.

d) a national Centre specifies additional requirements for sampling, reflecting national priorities.

[11] *International optional modules* are optional additional international instruments or procedures offered by the OECD and fully supported by the international contractors. Hereafter, i*nternational optional modules* are referred to as *optional modules*.

meetings, and any other training, such as within-school sampling training, live or pre-recorded training sessions for translation and reconciliation teams, occupational coding training, and data management training.

Based on the meeting type and hotel arrangements, the OECD Secretariat may, on the request of the international contractors, set a limit to the number of representatives per participating entity that can attend NPM meetings. *Participating entities* with separate *adjudicated entities* will have the possibility to send teams from all entities.

3.3. Requirements for Meeting and Training Session Attendees

Standard 3.3 Representatives from each national centre who attend international meetings must be able to work and communicate in English.

3.4. Feedback from National Centres to the International Contractors

Standard 3.4 National centres provide timely feedback to the international contractors on the domain frameworks, the development of instruments, the adaptation of instruments, and other domain-related matters that represent the perspectives of the relevant national stakeholders as defined in the NPM Manual.

3.5. Notification of Optional Modules

Standard 3.5 The national centre notifies the OECD Secretariat of its intention to participate in specific *optional modules* (including their choice of a test design) by 28 February 2027. Optional modules can be dropped between the **Field Trial** and the **Main Survey** but not added.

3.6. Notification of National Options

Standard 3.6 *National options* are *agreed upon* between the National Project Manager, the international contractors, and the OECD Secretariat, before 1 March 2027, in the year preceding the **Field Trial** and confirmed before 1 March 2028, in the year preceding the **Main Survey**.

3.7. Implementation of National Options and Optional Modules

Standard 3.7 Only *national options and optional modules* that are *agreed upon* between the National Project Manager and the international contractors are implemented.

3.8. Submission of Materials

Standard 3.8 PISA processes are implemented in accordance with guidance provided in the operation manuals, which specify the information and documentation to be submitted by the national centre to the international contractors, within agreed timelines.

3.9. Translation Plan

Standard 3.9 An *agreed upon* Translation Plan will be negotiated between the National Project Manager and the international contractors in accordance with agreed timelines and with the required translation and adaptation procedures.

3.10. Field Trial Participation

Standard 3.10 Participating entities must successfully implement the Field Trial before they are able to participate in the PISA 2029 Main Survey. Unless *agreed upon* between the National Project Manager and the international contractors, a Field Trial should occur in all assessment languages if the language group represents more than 5% of the target population.

3.11. Documentation Required for Quality Assurance of Participation and Timeliness

- Workflows in PISA Connect
- Meeting attendance records
- *Agreed upon* Translation Plan
- International contractors' records from communications, forms, or documents
- Field Trial data

4. Security of Materials and Data Protection

20. **Rationale**: The goal of the PISA assessment is to measure students' literacy in the assessed content domains. Prior familiarisation with the test materials, or training to the test, will heavily degrade the consistency and validity of the data. In extreme case, the results would only reflect participants' ability to memorise the test items rather than their underlying competences. Confidentiality of the assessment materials is extremely important to ensure that PISA measures competencies obtained during schooling rather than short-term learning success, and to make valid international comparisons.

21. The OECD is committed to protecting the personal data it processes, in accordance with its Personal Data Protection Rules. The OECD, the international contractors, and participating entities, must protect the personal data of participants collected during PISA, ensuring that all data is stored and processed in a secure and standardised manner.

4.1. PISA Materials Designated as Secure

Standard 4.1 PISA materials designated as secure are always kept confidential. Secure materials include all test materials, data, and draft materials. In particular:

- no-one other than approved project staff and participating students during the test session is able to access and view the test materials,
- no-one other than approved project staff will have access to secure PISA data and embargoed material, and
- formal confidentiality arrangements will be in place for all approved project staff.

4.2. Processing of Personal Data by National Centres and International Contractors

Standard 4.2 The PISA Governing Board's "Framework for Personal Data Protection in PISA" [EDU/PISA/GB(2025)21/ANN1/REV1] serves as a reference document for the OECD Secretariat, the PISA participants, the national centres implementing PISA in their local context, and the OECD's international contractors, and establishes mutual accountability among all parties for the protection of personal data. Throughout PISA 2029 operations, all parties will comply with it, including any subsequent revisions thereto approved by the PGB.

4.3. Documentation Required for Quality Assurance of Security of Materials and Data Protection

- Security arrangements as specified in the PISA operations manuals or *agreed upon* variation
- National Centre Quality Monitoring
- PISA Quality Monitor feedback and Data Collection Forms (only for Main Survey)
- National Centre Feedback Surveys (Field Trial and Main Survey).

5. Target population

22. **Rationale**: To ensure the comparability of data collected by each participating entity, all students participating in PISA 2029 must constitute a random sample of the *PISA Target Population*, representing a nearly equivalent age range across all participating entities. This requirement ensures differences in student age do not affect the conclusions drawn.

23. Students participating in the Financial Literacy Assessment *optional module* must be selected from the same population as defined for the core PISA 2029 assessment.

24. The optional teacher questionnaire must be administered to a random sample of teachers drawn from the internationally defined *PISA Desired Teacher Target Population*

in each participating entity participating in the Teacher Questionnaire *optional module*[12]. Unless otherwise *agreed upon*, the teacher sample shall be drawn from the same sample of schools as the student sample.

5.1. Core PISA Desired Target Student Population

Standard 5.1 The PISA Desired Target Population is *agreed upon*, taking into account specific national education systems and the constraints defined by the *PISA Target Population*. The *PISA Target Population* comprises all students attending schools located within the adjudicated entity, attending grade 7 or higher, who are between 15 years and 3 (completed) months and 16 years and 2 (completed) months at the beginning of the testing period.

5.2. PISA Defined Target Population

Standard 5.2 PISA aims to be as inclusive as possible. The PISA Defined Target Population should ideally coincide with the PISA Desired Target Population and must cover at least 95% of the PISA Desired Target Population. Accordingly, the combined *school-level* and *within-school exclusions* shall not exceed 5%. Wherever possible, students should be accommodated rather than excluded.

- School-level exclusions are restricted to:
  - schools excluded due to geographical inaccessibility, extremely small school size, infeasibility of administering PISA within the school, or other *agreed upon* reasons, where the total number of students represent less than 0.5% of the PISA Desired Target Population; and
  - schools comprising only students who would be classified as within-school exclusions, where the total number of students represent less than 2.0% of the PISA Desired Target Population.
- *Within-school exclusions* shall total less than 2.5% of the PISA Desired Target Population. Such exclusions could include, for example:
  - students who are functionally disabled to the extent that they are unable to participate in the PISA test. Functionally disabled students are those with a moderate to severe permanent physical disability.
  - students with a permanent cognitive, behavioural or emotional disability, as confirmed by qualified staff and which makes them unable to participate in the PISA test. These students are cognitively, behaviourally, or emotionally unable to follow even the general instructions of the assessment.
  - students with insufficient assessment language experience to participate in the PISA test. Students are considered to have insufficient assessment language experience if they meet **all** three of the following criteria:
    - they are not native speakers of the assessment language,

[12] Optional modules – optional additional international instruments or procedures offered by the OECD and fully supported by the international contractors.

- they have very limited proficiency in the assessment language, and
- they have received less than one year of instruction in the assessment language.

- Students for whom no assessment materials are available in the language of instruction.
- Students who cannot be assessed for another reason, as agreed upon.

5.3. Desired and Defined Target Student Population for the Financial Literacy Assessment

Standard 5.3 The desired and defined target population for the Financial Literacy Assessment shall be equivalent to the core PISA desired target population as *agreed upon.*

5.4. Optional PISA Desired Target Teacher Population

Standard 5.4 Teachers who are teaching text-based subjects in the PISA modal grade in the current academic year comprise the teacher target population for the purpose of participating in the Teacher Questionnaire international option. Text-based subjects are defined as subjects in which instruction requires substantial engagement with written texts. This includes subjects where reading comprehension, literature, and other language-related skills are primarily taught according to the national or state curriculum, as well as subjects such as social sciences, history and science when these make intensive use of texts for instruction. Only subjects taught in the language of the PISA reading assessment are included; teachers of foreign language subjects fall outside the scope of this target population.

For some adjudicated entities, the teacher population may be expanded to include teachers—of either reading/language arts or text-intensive subjects— teaching in the next largest PISA grade if this grade also contains more than 30% of the PISA student population. If there are two grades with at least 30% of PISA students enrolled in each grade, then there are two modal grades.

5.5. Testing Period

Standard 5.5 Unless otherwise *agreed upon*, the testing period:

- is no longer than ten consecutive weeks in duration
- does not coincide with the first six weeks of the academic year, and
- begins exactly four years from the beginning of the testing period in the previous PISA cycle.

5.6. Documentation Required for Quality Assurance of Population

- Target population agreed with the international contractor and documented on the respective *Sampling Forms*.

6. Sampling

25. **Rationale**: To be able to draw conclusions that are valid for the full population of fifteen-year-old students, a representative sample shall be selected for participation in the test. The sample size shall be sufficient to reduce the uncertainty arising from (finite) sampling in the inferences drawn in each participating entity and across entities. For this reason, minimum numbers of participating students and schools are specified.

26. The procedures used to draw samples for PISA 2029 are crucial to data quality. The goal of PISA is to collect data that are representative of the population, thereby ensuring that results are comparable, reliable, and valid. To achieve this goal, sampling procedures must follow established scientific principles.

27. The sample design commonly used in PISA is a stratified, two-stage random sampling design. In the first sampling stage, schools that enrol students from the PISA desired target population are grouped according to selected observable characteristics. Each group of students is referred to as a *stratum*. Within each stratum, schools are selected to participate in PISA as part of the first sampling stage, which is expected to be conducted by the international contractor. In the second sampling stage, students that belong to the PISA Desired Target Population are sampled from participating schools by national centres using the IEA OSE web-based application, which is constructed in accordance with *agreed upon*, established, and professionally recognised principles of scientific sampling.

6.1. School Sampling for the Main Survey

Standard 6.1 For the **Main Survey**, the international contractor samples schools using *agreed upon*, established, and professionally recognised principles of scientific sampling. These principles include, but are not limited to:

- The identification of appropriate stratification variables to reduce sampling variance and to facilitate the calculation of non-response adjustments.
- The incorporation of an agreed target cluster size of students from the PISA Desired Target Population (and of teachers from the PISA Desired Target Teacher Population, where applicable) to be selected from each sampled school.

6.2. School Sampling Principles for the Field Trial

Standard 6.2 For the **Field Trial**, national centres will have two options for the selection of schools to participate.:

- A random sample drawn by the international contractor together with the Main Survey sample. The Field Trial sample will have similar characteristics to the Main Survey sample.

- A convenience sample drawn by the national centre, which will be reviewed and approved by the international contractor.

The advantages and disadvantages of each Field Trial sample design option will be outlined in the School Sampling Manual and discussed individually with each NPM.

6.3. List of Sampled Schools

Standard 6.3 The international contractors will provide the national centre with a list of sampled schools for the Field Trial and Main Survey, together with their potential replacements (where applicable), **three months** before the agreed start of the respective test administration; unless otherwise discussed and *agreed upon.* National centres may then begin contacting schools to invite them to participate.

- This standard applies regardless of whether the Field Trial sample and the Main Survey sample were drawn together or separately (see Standard 6.2).
- Prior to the administration of PISA instruments, participating schools, students (and teachers, if applicable) must not receive any test materials or training sessions beyond those outlined in Standard 10.7.

6.4. Student Lists for Within-School Sampling

Standard 6.34 Student lists for within-school sampling:

- must include all students belonging to the PISA desired Target student Population in the sampled schools, including students that will be excluded from the test session, and
- must be collected no earlier than 8 weeks prior to the start of test administration or later, unless discussed and *agreed upon.*

6.5. Use of IEA Online Survey Expert by National Centres

Standard 6.5 The IEA Online Survey Expert (OSE) is a web-based application that participating entities are required to use to manage activities related to school participation tracking and within-school sampling. Users of the IEA OSE must have a stable internet connection and meet the minimum system requirements specified in the Within-School Sampling Manual.

6.6. Responsibility of National Centres and School Coordinators in the Secure use of IEA Online Survey Expert

Standard 6.6 National centres and School Coordinators will have access to the IEA OSE. Access rights will be role-based. IEA will provide national centres with the necessary credentials to log into the application. National centres will then be responsible for distributing the log in credentials to the School Coordinators in the

participating institutions, for communicating responsibilities regarding data confidentiality-related procedures, and for ensuring that only authorised School Coordinators have access to the IEA OSE through these credentials.

- School Coordinators will be able to enter and manage all within-school information on the platform. All sensitive or confidential information will be automatically encrypted prior to submission to the national centres. The encryption key will be kept by the School Coordinator. Each School Coordinator will be responsible for safeguarding their respective encryption key and login credentials.
- National centres will be able to enter and manage all school-level information on the platform. All school-level sensitive or confidential information will be automatically encrypted prior to submission to the Contractor. The encryption key will be kept by the national centre. The national centre will be responsible for safeguarding their respective encryption key and login credentials.
- If a participating school does not have stable Internet access, national centres must act as the School Coordinator when entering information onto the platform. Encryption of sensitive or confidential information can still be obtained by a work-around procedure.
- National centres may also act as School Coordinators for any other specific agreed-upon reason.

6.7. Verification of school sample in IEA OSE before test administration and potential modification to Sampling and Tracking Forms / Lists

Standard 6.7 Once the international contractor has provided the national centre with the necessary credentials to access IEA OSE, participating entities must compare the list of sampled schools, and their replacements (if applicable), provided by the international contractor with the set of schools listed in the application prior to starting any within-school sampling activities.

Participating entities may need to further modify some settings in IEA OSE according to *agreed upon structural adaptations*[13]. Participating entities must thoroughly check their versions of IEA OSE as outlined in the Within-school Sampling Manual.

6.8. Student Sampling Principle and Execution

Standard 6.8 National Centres sample students from the student lists collected in accordance with Standard 8.4 using the IEA OSE. This web-based application is

[13] **Structural adaptations to Excel templates** such as input list for sampling, tracking forms and templates to export lists of sampled candidates consist of any changes to the data section of an Excel template associated with a particular template. This includes any changes to:

- column names, and
- single cells in the heading of the data worksheet or anywhere in other worksheets, that are imported into IEA OSE.

provided by the international contractors for this purpose and applies established, and professionally recognised principles of scientific sampling.

6.9. Alternative Execution of Sampling Procedures

Standard 6.9 Whenever a participating entity:

- chooses to draw the Main Survey school sample, the national centre provides the international contractor with the data and documentation required to reproduce and verify the correctness of the sampling procedures applied.

Any exceptional costs associated with reproducing and verifying a school sample drawn by the national centre will be borne by the national centre.

- In accordance with the *Timeliness* principle governing these Technical Standards, national centres must use the IEA OSE for student sampling and tracking purposes.

6.10. Alternative Methods of Drawing Samples

Standard 6.10 Any agreement with the international contractor on alternative sampling methods for drawing samples must follow the principle that the sampling methods used are scientifically valid and consistent with PISA's documented sampling methods.

6.11. Eligibility for PISA

Standard 6.11 Unless otherwise *agreed upon*, only students sampled as described in Standards 6.1 – 6.34 participate in the test.

6.12. Overall Field Trial Sample Size of Assessed Students

Standard 6.12 The **Field Trial** student sample size will be determined by the test design and the language of assessment:

- For the largest language of assessment in each *adjudicated entity*, the sample size will be set to achieve a minimum of 200 student responses per item.
- For all other assessment languages that apply to at least 5% of the target population, the Field Trial student sample will be a minimum of 100 student responses per item.
- For additional adjudicated entities, where the assessment language applies to at least 5% of the target population in the entity, the Field Trial student sample will be a minimum of 100 student responses per item.

6.13. Overall Main Survey Sample Size of Assessed Students

Standard 6.13 The Main Survey student sample size depends on whether a country participates in Financial Literacy:

- *Without Financial Literacy:* A minimum of 6 300 students is required, and 2 100 for additional adjudicated entities, or the entire PISA Defined Target Population where that population is smaller than 6 300 and 2 100, respectively.
- *With Financial Literacy:* A minimum of 7 150 students is required, and 2 100 for additional adjudicated entities, or the entire PISA Defined Target Population where that population is smaller than 7 150 and 2 100, respectively.

6.14. School Sample Size

Standard 6.14 Unless otherwise *agreed upon*, the school sample for the Main Survey must be sufficient to achieve the desired reliability of cross-country and trend comparisons of mean scores and other statistical indicators between participating entities. Accordingly, the school sample must result in:

- a minimum of 170 participating schools, and 50 participating schools for additional adjudicated entities, or
- the inclusion of all schools enrolling students from the PISA Defined Target Population, where the total number of such schools is fewer than 170 and 50, respectively.

Lower school sample size targets can be *agreed upon* only where there is evidence that the reduced sample size is sufficient to achieve a sampling error for mean score estimates in the core domains not exceeding 2.5 score points on the PISA scale. Such evidence must take into account sampling outcomes from the most recent PISA cycles for the participating entity requesting the reduction.

6.15. School stratification

Standard 6.15 As noted in Standard 6.1, stratification can be an effective technique for reducing sampling variance and facilitating the calculation of non-response adjustments.

- National centres will discuss and agree with the international contractor on the stratification design for the Main Survey sample and, where applicable, the Field Trial sample. This discussion will be guided by the School Stratification Manual.
- To minimise the risk of very small numbers of students or institutions participating within small strata, a minimum of eight schools must be sampled from each explicit school stratum, unless otherwise *agreed upon*. Where an explicit stratum contains fewer than eight schools, all schools in that stratum must be selected to participate.

6.16. Minimum Student Target Cluster Size

Standard 6.16 To ensure adequate coverage of all assessment elements across participating schools, the minimum acceptable sample size within each school is 25 students, or all eligible students in schools with fewer than 25 eligible students enrolled.

When determining the target cluster size for a participating entity, or for a stratum within a participating entity, it is necessary to ensure that the minimum sample size requirements for both schools and students will be met.

6.17. School Response Rate

Standard 6.17 For the Main Survey, data from schools with an unweighted PISA student response rate greater than 33% will be included in the PISA datasets, and the school shall be counted as a respondent. Schools that do not meet this threshold shall be classified as a non-respondent, and no student, school-level or teacher data, if applicable, will be retained.

The final weighted response rate must be at least 85%. Where the weighted response rate falls below 85%, but above 65%, an acceptable response rate can still be achieved through the inclusion of the assigned replacement schools. The acceptable response rate (ARR) is, in these cases, higher than 85%, and set as a function of the original response rate before replacement (RRBR), using the following formula:

$$ARR = 85\% + (85\% - RRBR)/2$$

6.18. School-level Non-Response Bias Analysis

Standard 6.18 For the Main Survey, if the final weighted school response rate falls below 85%, before the inclusion of replacement schools, and below the acceptable response rate after their inclusion (see Standard 6.17), national centres will be required to submit a school-level Non-Response Bias Analysis. This analysis must support the argument that no significant bias in student inferences would result from the lower school response rate

In preparing the school-level Non-Response Bias Analysis, national centres will follow the guidelines outlined in the Non-response Bias Analysis Manual prepared by the international contractor.

6.19. Student Response Rate

Standard 6.19 Students sampled for the PISA assessment are considered respondents and included in the analysis if they respond to a minimum of five cognitive items, or a combination of at least one cognitive item and all questionnaire items that contribute to the computation of the socio-economic index.

The final weighted student response rate is at least 85% of all students sampled for the PISA assessment from the PISA Defined Target Population, calculated across participating schools.

6.20. Student-level Non-Response Bias Analysis

Standard 6.20 For the Main Survey, if the final weighted student response rate falls below 85% of sampled eligible and non-excluded students (see Standard 6.19), national centres will be required to submit a student-level Non-Response Bias Analysis. This analysis must support the argument that no significant bias in student-level inferences would result from the lower student response rate among students in participating schools.

In preparing the student-level Non-Response Bias Analysis, national centres will follow the guidelines outlined in the Non-response Bias Analysis Manual prepared by the international contractor.

6.21. Questionnaire Data Treatment in OECD Reports

Standard 6.21 Students will be counted as respondents according with Standard 6.19.

Teachers recorded in the database as having completed at least one valid response will be counted as respondents.

Analyses based on questionnaire data that do not cover a weighted minimum of 75% of the target population shall be flagged in OECD reports or replaced by a missing-data code.

6.22. Documentation Required for Quality Assurance of Sampling

- Sampling procedures as specified in the PISA operations manuals
- Sampling forms submitted to the international contractor
- School sample drawn by the international contractors (or if drawn by the national centre, then verified by the international contractor)
- Student sample drawn through the international contractor's web-based application IEA OSE.
- National Centre Feedback Surveys (Field Trial and Main Survey).
- Non-Response Bias Analyses prepared by national centres (if applicable).

7. Assessment

28. **Rationale**: Test and questionnaire materials must be developed in a way that will ensure that the conclusions reached from a given set of data do not simply reflect the setting in which the data were collected but hold for a variety of settings and are valid in the target population at large.

7.1. Core PISA 2029 Test

Standard 7.1 The core test for PISA 2029 is a computer-based 2-hour test that includes the assessment of Reading (focal domain), Mathematics, Science, as well as MAIL.

7.2. Core PISA 2029 Questionnaires

Standard 7.2 The core PISA questionnaires are delivered in a computer-based mode and include a 35-minute Student Questionnaire administered to every participating student and a School Questionnaire administered to school administrators of participating schools.

A System-level Questionnaire is also administered to PGB representatives by the OECD Secretariat.

7.3. Optional PISA 2029 Financial Literacy Assessment

Standard 7.3 One of the *optional modules* offered for PISA 2029 participants is the Financial Literacy Assessment, which will assess students' ability to understand, manage, and apply knowledge to financial concepts, risks, and situations.

7.4. Optional PISA 2029 Questionnaires

Standard 7.4 PISA 2029 also includes a number of optional questionnaire components. The final decision on the options supported by the international contractors (i.e. *optional modules*) will depend on the number of participants opting for them.

. Participating entities that choose to administer the optional assessment of Financial Literacy will also administer a Financial Literacy Questionnaire for students in addition to the core student questionnaire.

In addition to the core questionnaires, participating entities may choose to administer some of the optional questionnaires. The choice of *option module* questionnaires is limited in PISA 2029 to the following:

- An Emerging Policy Questionnaire, which is administered to the students participating in the core computer-based PISA assessment.
- A computer- or paper-based Parent Questionnaire, which is administered to parents of the students participating in the PISA assessment.
- A computer-based Teacher Questionnaire (eligible teacher population defined in Standard 5.4).

7.5. Assessment Development

Standard 7.5 All test materials and questionnaires, including core and optional modules are developed by international contractors using established, and professionally recognised principles of test and questionnaire development. These principles include, but are not limited to:

- Tasks must elicit responses that can provide evidence of the test takers' capacity in the domain being assessed.
- Tasks must draw on knowledge and understanding that are intrinsic to the domain
- Tasks must be presented in a format appropriate to the type of question being asked, without unnecessarily relying on extrinsic skills.
- The set of tasks must provide coverage of the area of learning under investigation
- They must be practical to administer.

7.6. Modes of Assessment

Standard 7.6 PISA 2029 will continue to support online and offline delivery modes within the *computer-based assessment* (CBA).

7.7. Test Designs

Standard 7.7 PISA 2029 supports two assessment designs for the Main Survey, among which each national centre must select one:

- the *Design without Financial Literacy* includes core domains and the innovative domain (MAIL),
- the *Design with Financial Literacy* includes core domains, the innovative domain (MAIL), and the optional module of Financial Literacy as part of a single assessment sample.

Both designs aim to minimise differences in the allocation of testing time across the three core domains and the innovative domain (MAIL) for larger entities ("balanced design"); for smaller entities a stronger priority is assigned to the assessment of the focal core domain.

7.8. Language of Assessment

Standard 7.8 The PISA test is administered to a student in a language of instruction provided by the sampled school to that sampled student in the focal domain (Reading) of the test.

If the language of instruction is not well defined across the set of sampled students, then, if *agreed upon*, a choice of language can be provided, with the decision being made by the national centre level. Agreement with the international contractor will be subject to the principle that the language options provided should be languages that are common in the community and are common languages of instruction in schools in that *adjudicated entity*.

If the language of instruction differs across domains, then, if *agreed upon*, students may be tested using assessment instruments in more than one language on the condition that the test language of each domain matches the language of instruction for the corresponding school subject. Information obtained from the *Field Trial*[14] will be used to gauge the suitability of using assessment instruments with more than one language in the Main Survey.

In all cases, the choice of test language(s) in the assessment instruments is made prior to the administration of the test.

[14] The Field Trial is the first period of data collection. The purpose of the Field Trial is:

1. to collect data to ensure that the instruments developed for the Main Survey contain test and questionnaire items that are sound in all participating entities and that they are properly translated; and
2. to test the operational procedures.

7.9. Documentation Required for Quality Assurance of Assessment Standards

- Test and questionnaire designs created by the international contractors, recommended by the Technical Advisory Group and approved by the PGB[15]

8. Translation and Adaptation of Tests, Questionnaires and School-Level Materials

29. **Rationale**: To enable valid comparisons of performance across participating entities, all assessment instruments and other survey materials must be as linguistically equivalent as possible. In fact, it is of utmost importance to provide uniform information to the students of all participating entities. Accordingly, not only the assessment instruments, but also the instructions given to the students and the data collection procedures must be consistent across participating entities and languages.

30. To achieve this goal, other individuals who play a key role in the data collection process, i.e. the *Test Administrators, School Coordinators,* and *School Associates*, should receive uniform information and training in all participating entities.

8.1. Test Items Used in Previous Cycles

Standard 8.1 National versions of test items used in previous cycles will be administered without modification, except where revisions have been made to the source version, where an outright error has been identified in a national version, or when a change in the national context calls for an adjustment. A change to make the trend units more accessible and responsive to different screen resolutions will result in slightly different layout but they will be functionally equivalent to those in the previous PISA cycles. The display of trend items in the PISA 2029 assessment platform will be quality assured by the Core A Contractor for the English version and by national centres for all other language versions.

8.2. Questionnaire Items Used in Previous Cycles

Standard 8.2 National versions of questionnaire items used in previous cycles will be administered without modification, except where revisions have been made to the source version, where an outright error has been identified in a national version, or when a change in the national context calls for an adjustment. A change to make the questionnaires more accessible and responsive to different screen resolutions will result in slightly different layout.

[15] Questionnaires will be reviewed by the Questionnaire Expert group, and new reading items will be reviewed by the Reading Expert Group.

8.3. Adaptations to the Source Versions of Tests and Questionnaires

Standard 8.3 The national versions of the tests and questionnaires must be as linguistically equivalent to the source version[16] as possible. If any adaptations to the local context and usage are required in the tests, they must be documented by the PISA participant and validated by the international contractors. If any adaptations to the local context and usage are required in the questionnaires, they must be *agreed upon* between the National Project Manager and the international contractors.

8.4. Adaptations to the School-level Materials

Standard 8.4 The national versions of the school-level materials[17] must remain consistent with the English source versions. Any adaptations required to reflect the local context must be *agreed upon* between the National Project Manager and the international contractors.

8.5. Translation of Assessment Materials

Standard 8.5 The following materials are translated or adapted from the English source version, adapted from the French reference version for Participants that administer the instruments in French, adapted from a verified borrowed version, or adapted from a centrally produced common reference version into the assessment language by the participating entities—and verified by the international contractors for languages administered to more than 10% of the target population—in order to be as linguistically equivalent as possible to the international source versions.

- All administered test instruments
- All administered questionnaires
- The Coding Guides (unless *agreed upon*).

8.6. Human translation requirement of Tests and Questionnaires

Standard 8.6 All translations of test materials, coding guides, and questionnaires made by national centres shall be produced entirely by human translators, without reliance on generative artificial intelligence or machine translation at any stage of production. The

[16] *The international source versions* of the assessment instruments is provided in English. The international contractors will also provide a French reference version. according to contractual specifications.

[17] The key *school-level materials* include School Co-ordinator Manual and Test Administrator Manual or School Associate Manual; as well as Test administration scripts and forms defined in these manuals.

second translation may be produced by the international contractors using supervised automated translation tools that maintain the confidentiality of the test materials.

Test materials that follow the double translation process include stimuli and items but do not include the simulated online environment in MAIL tasks. All questionnaires follow the double translation process.

Coding guides and School-level materials follow a single translation process, and the human translation requirement applies to these materials.

8.7. Translation of School-level Materials

Standard 8.7 Unless otherwise *agreed upon* between the National Project Manager and the international contractors, school-level materials are translated or adapted into the assessment language. These translations or adaptations must be functionally equivalent to the international English *source version*.

8.8. Verification of translated materials

Standard 8.8 Questionnaires must be translated and submitted for linguistic verification only after all *adaptations* have been *agreed upon*.

An ***adaptation*** is an intentional addition to, deletion from or deviation from the international source version, made to:

- align with local usage or context
- preserve equivalence where a straightforward translation cannot ensure equivalence
- collect country-specific data in addition to data for the international dataset.

Adaptations made to test materials must be documented before these materials are submitted for linguistic verification. The adaptation approval procedures are described in detail in the *Translation and Adaptation Guidelines*.

8.9. Documentation Required for Quality Assurance of Translation and Adaptation

31. The documentation listed in this standard will be applied to quality assurance of instruments that are in a language that is administered to more than 10% of the target population:

- *Agreed upon* Translation Plan, developed in accordance with the specifications in the PISA operations manuals, whereby any newly translated questionnaires and cognitive instruments follow a double translation and reconciliation process; and whereby any materials adapted from the English source version, from the French reference version or from a verified borrowed version (from another participant) follow a thoroughly documented adaptation process.
- *Agreed upon* Questionnaire adaptations, in the relevant monitoring forms in the Workflow Manager

- Online forms and reports in the Workflow Manager, in which adaptations to assessment units, orientation and help files, and coding guides are documented. Adaptations will be checked by international verifiers for compliance with the PISA Translation and Adaptation Guidelines, and the verifiers' recommendations will be vetted by the translation referee.
- Verification feedback in the relevant monitoring forms in the Workflow Manager
- National Centre Feedback Surveys (Field Trial and Main Survey)
- Item and scale statistics generated by the international contractors (assessment materials and questionnaires).

9. Computer-based Assessment: Testing of National Software Versions and Technical Support

32. **Rationale**: Participating entities administering the PISA assessment in the computer-based mode must thoroughly test and validate the implementation of the national version and adaptations of the test and questionnaire assessment materials, in the digital platform used to deliver the PISA computer-based assessment (CBA) in schools. Participating entities are also primarily responsible for resolving PISA-related operational issues in their country/economy, including hardware issues and provision of technical support to schools and *Test Administrators*.

9.1. CBA Test Platform

Standard 9.1 The international contractors will test and provide written quality assurance confirming that both online and offline CBA solutions meet with the PISA 2029 assessment delivery specifications, including implementation of the national versions of the test and questionnaire instruments.

Participating entities must test the national test versions within the assessment delivery platform, following established testing plans as outlined in documentation provided to national centres, to ensure the correct implementation of national adaptations, the display of national languages, and proper functioning on computers typically found in schools in each participating entity. Testing results must be submitted to the international contractors to ensure that any identified errors are promptly resolved.

9.2. CBA Software Helpdesk Provision

Standard 9.2 Each participating entity should designate a PISA helpdesk and provide contact information to all *Test Administrators* and *School Co-ordinators* (or *School Associates)*.

9.3. Helpdesk Staff Responsibilities

Standard 9.3 The helpdesk staff must:

- be familiar with the PISA computer system requirements applications and training materials,
- be familiar with all national software standards and procedures; and
- attend the test administrator training sessions to become familiar with the CBA and appreciate the challenges faced by schools and *Test Administrators*.

9.4. Documentation Required for Quality Assurance of Testing of National Software Versions and Technical Support

- Detailed testing plans
- Review of testing results
- National Centre Quality Monitoring
- National Centre Feedback Surveys (Field Trial and Main Survey).

10. Field operations – Test Administration, Test Administrator Training and Quality Monitoring

33. **Rationale**: To obtain valid assessment results, the data collected must be of high quality, i.e. the data must be collected in a consistent, reliable and valid manner. This objective is achieved primarily through the work of the *Test Administrator*

The *PISA Quality Monitors*[18] monitor the data collection activities during the Main Survey within participating entities to ensure adherence to the standards related to test administration.[19]

10.1. Trainer Test Administrator Training Sessions

Standard 10.1 NPMs or their designee shall receive trainer training from qualified contractor staff on PISA materials and procedures, to prepare them to train their PISA *Test Administrators*.

[18] *PISA Quality Monitor* – person(s) nominated by the National Project Manager and employed by the international contractors to monitor test administration quality their participating entity

[19] New participating entities in the PISA 2029 cycle are required to participate in quality monitoring procedures during the Field Trial.

10.2. Training Materials

Standard 10.2 NPMs or designees shall use the comprehensive training materials and approach developed by the international contractors, as provided on *PISA Connect*, to train their *PISA Test Administrators*.

10.3. Test Administrator Training

Standard 10.3 NPMs or their designees shall conduct Test Administrator training in person and/or online, unless a suitable alternative is *agreed upon*.

10.4. Test Administrator Criteria

Standard 10.4 The relationship between *Test Administrators* or *School Associates* and participating students must not compromise the credibility of the test session. In particular, the *Test Administrator* or *School Associates* should **not** be:

- a relative, or a personal acquaintance of any student in the assessment sessions they administer
- the reading, mathematics, or science instructor of any student in the assessment sessions they administer

Test Administrators or *School Associates* **should preferably not** be school staff.

10.5. Test Administration Sessions

Standard 10.5 All test sessions must follow international procedures as specified in the PISA Test Administrator's Manual or School Associate's Manual, with particular attention to:

- test session timing
- maintaining standardised test conditions
- responding to students' questions
- student tracking, and
- providing login details (for CBA).

Test Administrators must conduct all test sessions using the Test Administration Script. Test Administrators are required to follow the script word-for word to ensure consistency of all test sessions across participating entities. Deviations from the script may lead to errors in data collection and reduce the comparability of results

10.6. Administration of National Option Instruments

Standard 10.6 Any national options that are not part of the PISA core components must be administered only after all core PISA test and questionnaire instruments have been administered to students that are part of the international PISA sample, unless *agreed upon*.

10.7. Information and Training Prior to the Test Session

Standard 10.7 Participating schools, students and/or teachers should only receive general information about the test prior to the test sessions. In particular, it is inappropriate to offer formal training sessions to participating students, in order to cover skills or knowledge from PISA test items, with the intention to raise PISA scores.

It is unnecessary to train students for interacting with the student interface, with different item types or response formats prior to the testing session. All PISA test materials and procedures are accompanied by detailed instructions as well as by orientation modules at the beginning of each test session to ensure that participants are familiarised with the interface and with all the question formats that they will encounter.

"Formal training sessions" refers to training that relies on standardised instructional material and involves feedback provided by an instructor, machine, or other training participants. Formal training sessions may include (but are not limited to) lectures, practice tests, drills, or online instruction modules.

The general information about the survey shared with participants may include information about the length of the test, the general scoring principles applied to missing and incorrect answers, data protection and confidentiality of results. It may include an OECD set of released test materials prepared for this purpose, but should not assemble sample items in PISA-like test forms with the intent to teach or prepare students for participation in PISA.

10.8. Rewards

Standard 10.8 National centres must not offer rewards or incentives to students, teachers, or schools that are linked to student achievement in the PISA assessment.

This restriction does not apply to incentives or rewards intended to encourage and improve participation, provided they are unrelated to student achievement in the PISA assessment.

10.9. Monitoring of Test Administration

Standard 10.9 Trained independent PISA Quality Monitors monitor PISA Main Survey test administrations through site visits.

10.10. PISA Quality Monitoring Training

Standard 10.10 PQMs must successfully complete the self-training materials, participate in webinars to review and reinforce the self-training, and attend the Test Administrator training organised by the national centre, unless otherwise *agreed upon*.

10.11. PISA Quality Monitoring Site Visits

Standard 10.11 Ten site visits to observe test administration sessions shall be conducted in each participating entity, with five additional site visits in each additional adjudicated region for the **Main Survey**.

For each participating entity that is a new participant to PISA 2029, five additional site visits during the Field Trial shall be conducted to observe test administration sessions and identify potential issues that can be rectified prior to the Main Survey.

10.12. Selection of Test Administration Visits

Standard 10.12 The national centre provides the international contractors the assistance required to implement the site visits effectively. This includes nominating a sufficient number of qualified individuals to ensure that the required number of schools is observed, as well as providing timely and accurate communication of school contact information and scheduled test dates.

Test administration sessions that are the subject of site visits are selected by the international contractors, in consultation with PQMs, and shall be representative of a variety of schools within the participating entity.

10.13. Documentation Required for Quality Assurance of Field Operations

- Records of participation in trainer training sessions in standardised procedures by qualified contractor staff
- Review of Test Administrator Training Observation Forms
- Session Report Forms
- National Centre Feedback Surveys (Field Trial and Main Survey)
- Record of standard training of PQMs
- PISA Quality Monitors feedback and Data Collection Forms (only for Main Survey)
- PISA Quality Monitoring Observation Report (only for Main Survey)

11. Response Coding

34. **Rationale**: All coding procedures for the core PISA assessment must be standardised, follow approved coding designs, and coders must complete training sessions to ensure the comparability of the data.

11.1. Coder Recruitment

Standard 11.1 Coders are recruited following procedures specified in the *PISA Coding Procedures*.

11.2. International Coder Training Sessions

Standard 11.2 Representatives from each national centre must attend the international PISA coder training session for all domains, for both the **Field Trial** and the **Main Survey**. The number of Coder Training session participants will depend on factors such as the expertise of national centre staff, and resource availability.

11.3. Coder Training at National Centres

Standard 11.3 Coders are trained by the representatives from the national centre who were trained at the international PISA coder training session following procedures specified in the *PISA Coding Procedures*.

11.4. Coding Guides

Standard 11.4 The coding scheme described in the Coding Guides is implemented according to instructions from the international contractors.

11.5. Coding Implementation

Standard 11.5 Both the single and multiple coding procedures must be implemented as specified in the *PISA Coding Procedures*. These procedures are implemented in the coding software that participating entities will be required to use. The coding design for PISA 2029 replicates the design used in previous cycles of PISA.

11.6. Documentation Required for Quality Assurance of Coding

- Indices of inter-coder agreement
- National Centre Feedback Surveys (Field Trial and Main Survey)

12. Data Management

35. **Rationale:** The timely progression of the project within the prescribed timelines depends on the quick and efficient submission of all collected data. To minimise errors during the consolidation of national databases, any changes in data format implemented after the initial agreement must be announced. As the consolidation and merging of national databases is a complex and time-intensive process, the international contractors require ongoing access to national resources to clarify uncertainties and resolve discrepancies in a timely manner.

12.1. Data Manager and Data Administration Responsibilities at National Centres

Standard 12.1 Each national centre must nominate one *Data Manager* and one or more *Data Administrators,* as *agreed upon*. The number of Data Administrators will depend on factors such as the expertise of national centre staff, and resource availability.

The *Data Manager* is responsible for the handling of PISA data within the national centre, as outlined in the Data Management Manual. The *Data Manager* must:

- be able to communicate in English
- be authorised to respond to international contractor data queries
- be available for a three-month period immediately after the database is submitted unless otherwise *agreed upon*
- respond to international contractor queries within three working days, and
- be responsible for resolving data discrepancies.

12.2. Data Manager Training

Standard 12.2 The *Data Manager* from each national centre must attend the international PISA data management training session for the **Field Trial and Main Survey**.

12.3. Data Administrator Training

Standard 12.3 *Data Administrators* are trained by *Data Managers* following agreed procedures outlined in the Data Management Manual.

12.4. Storing of Data at the National Centre

Standard 12.4 National centres store PISA data using the software provided by international contractors:

- Sampling data are stored and encrypted (if applicable) in the IEA OSE web-based application.

- Student assessment responses, including questionnaire data from schools, and teachers, if applicable, are stored in the assessment delivery platform
- Students' open-ended cognitive responses are stored in the ACER Marking System.

Paper-based responses to the Parent Questionnaire are stored in ACER Marking System. All data must be stored secure in accordance with the standards outlined in Section 4 of this document.

12.5. Data Submission Prerequisite

Standard 12.5 Before data is submitted by national centres it must be validated by the *Data Manager* as outlined in the Data Management Manual.

12.6. Data Submission Timeline

Standard 12.6 The timeline for submission of *complete set* of *PISA data*[20] to the international contractors is within eight weeks of the last day of testing for the **Field Trial** and within eight weeks of the last day of testing for the **Main Survey**, unless otherwise *agreed upon*.

12.7. Response Data Mode of Delivery

Standard 12.7 Response data include responses from all *instruments*, including the test data and questionnaires, and must be delivered by participating entities to the international contractors as described in the Data Management Manual. In particular:

- all responses are submitted via the assessment delivery platform. Response data also includes log-file information such as, but not limited to, time stamps.
- Paper-based responses to the Parent Questionnaire are submitted via non-confidential database exported from the ACER Marking System.

[20] *Complete set of PISA data* includes all sampling data and all response data, which contain all responses of participants to all test and questionnaire instruments.

12.8. Response Data Conditions

Standard 12.8 Unless *agreed upon*, all response data are submitted without recoding any of the original response variables.

All *instruments* for all additional adjudicated entities will contain the same variables as the *primary adjudicated entity* of the participating entity.

12.9. Accompanying documentation

Standard 12.9 Each participating entity submits its data with full documentation as specified in the *Data Management Manual*.

12.10. Documentation Required for Quality Assurance of Data Management

- International contractors' records of communications, forms, or documents.

13. Archiving of Materials

36. **Rationale**: The international contractors will maintain an electronic archive that provides a comprehensive record of all materials used. The archive will ensure continuity of materials across PISA survey cycles for participating entities, thereby supporting the accumulation and retention of national knowledge developed over successive PISA cycles. This will also ensure that the relevant materials are readily to the international contractors when required, including data cleaning activities.

13.1. Scope of Archiving

Standard 13.1 Archiving applies to all materials from both the **Field Trial** and the **Main Survey**, including student and school assessment materials and, where appliable, parent and teacher materials, as well as relevant school-level materials and coding guides.

13.2. National Materials to be Archived at the National Centres

Standard 13.2 National materials to be archived at the national centre include:

- all sampling forms[21]
- all student lists and, where applicable, all teacher lists
- all Student Tracking Forms and, where applicable, all Teacher Tracking Forms)
- all respondents' paper-based questionnaires (for participating entities that administered the Parent Questionnaire as a paper-based assessment).

The archiving period for these materials will comply with the *Framework for Personal Data Protection in PISA*[22], as approved by the PISA Governing Board.

13.3. National Materials to be Submitted by National Centres to the International Contractors for Archiving

Standard 13.3 Upon approval of the final versions, the National Project Manager shall submit one copy of each of the following adapted and translated **Main Survey** materials to the international contractors, via *PISA Connect*:

- electronic national versions of the school-level materials, and
- electronic national versions of the Coding Guides.

13.4. National Materials to be Archived by the International Contractors and the OECD

Standard 13.4 The international contractors are responsible for preparing and providing the PISA 2029 materials (all Test and Questionnaire instruments, school-level materials and Coding Guides, including all national versions) to the OECD for archiving.

The international contractors are also responsible for archiving the following:

- all response files from the assessment delivery platform
- all data submitted by national centres to International Contractors, including sampling forms.

The OECD will maintain a permanent electronic archive of the PISA 2029 materials. Test and Questionnaire instruments, school-level materials and Coding Guides, including all national versions.

Central archiving by the OECD or its international contractors will comply with the F*ramework for Personal Data Protection in PISA*.

[21] *Sampling forms* refers to the forms outlined in the School Sampling Manual, *agreed upon* and uploaded on the PISA Connect.

[22] The *Framework for Personal Data Protection in PISA* is available at: [EDU/PISA/GB(2025)21/ANN1/REV1].

13.5. Documentation Required for Quality Assurance of Archiving

- Materials listed in Standards 13.2 and 13.3

14. Databases for Reporting

14.1. Reference versions of PISA Databases

Standard 14.1 The international contractors will prepare the reference version of the de-identified databases for analysis and reporting, on behalf of the OECD. These include a national database for each participating entity, an international database collating data from all participants, and a public version of the international database. The OECD and the international contractors will comply with all related requirements set by the *Framework for Personal Data Protection in PISA.*

14.2. Withdrawing of National Data from the International Database

Standard 14.2 The PGB will determine the deadline and procedures for withdrawing national data from the international PISA database. Participating entities can withdraw their data only prior to obtaining access to data from other participating entities. Withdrawn data will not be made available to other participating entities. Conversely, participating entities that withdraw their data will not be given access to the "international database" containing data from other participating entities.

14.3. Publication of National Results

Standard 14.3 Each participating entity can publish its own data after the date established by the PGB for the release of the initial international OECD publication.

14.4. Copyright

Standard 14.4 As the guardian of the PISA process and producer of the international database, the OECD will hold copyright in the database and in all original materials developed for, or included in, the PISA **Field Trial** and PISA **Main Survey,** including assessment materials, school-level materials, and coding guides) in any language and format.

Glossary

ACER – Australian Council *for* Educational Research, the Core A and Core B contractor for PISA 2029 (https://www.acer.org/au/).

Adaptation - an intentional addition to, deletion from or deviation from the international source version, made to align with local usage or context; to preserve equivalence where a straightforward translation cannot ensure equivalence; or to collect country-specific data in addition to data for the international dataset

Adjudicated Entity – a country, geographic region, or similarly defined population, for which the international contractors fully implement quality assurance and quality control mechanisms and endorse, or otherwise, the publication of separate PISA results. A participating entity may manage more than one adjudicated entity.

Agreed timelines – timelines that are specified in the PISA operations manuals, or variations that are mutually *agreed upon* between the National Project Manager and the international contractors.

Agreed upon – a decision reached by mutual agreement between the relevant parties (e.g. the National Project Manager, the international contractors, and/or the OECD Secretariat), as specified in the relevant standard

cApStAn – organisation that is responsible for linguistic quality control in PISA (https://www.capstan.be/)

Field Trial is the first period of data collection. The purpose of the Field Trial is to:

- give participating entities the opportunity to try out the logistics of their test procedures;allow the international contractors to make detailed analyses of the *items* so that only suitable ones are included in the Main Survey.

HallStat – PISA translation referee.

IEA International Association for the Evaluation of Educational Achievement, the Core C contractor for PISA 2029 (https://www.iea.nl/).

IEA OSE The IEA's Online Survey Expert is the web-based application used for within-school sampling and tracking purposes.

International Standard Classification of Education (ISCED) is maintained by OECD, European Union, and UNESCO Institute for Statistics. PISA uses ISCED 2011 classification. See OECD/Eurostat/UIS (2015[1]).

Item - a question, a statement or a task in tests and questionnaires that requires a response from participants (students, school principals or school administrators, and if applicable, teachers and parents).

Media and Artificial Intelligence Literacy (MAIL) – the innovative assessment domain for PISA 2029.

National centre quality monitoring – the procedures by which the international contractors monitor the quality of all aspects of the implementation of the survey by a national centre.

National option – a national option occurs if:

a) a national centre administers any additional instrumentation, for example a test or questionnaire, to schools or students that are part of the PISA international sample. Note that in the case of adding items to the questionnaires, an addition of five or more items to either the school questionnaire or the student questionnaire is regarded as a national option.

OR

b) a national centre administers any PISA international instrumentation to any students or schools that are not part of an international PISA sample (age-based or grade based) and therefore will not be included in the respective PISA international database.

OR

c) a national centre administers any PISA optional module only in some, not all, jurisdictions. The participating entity will in this case sign up for the optional module option with the OECD, as if it was administered in the entire jurisdiction, and the additional work involved with administering the optional module to part of the jurisdiction only is considered a national option.

Optional modules – optional additional international instruments or procedures sponsored by the OECD and fully supported by the international contractors.

Participating entity – an administration centre, commonly called a national centre, that is managed by a person or persons, usually the National Project Manager, who is/are responsible for administering PISA in one or more adjudicated entities.

PISA National Project Manager (NPM) – The NPM is responsible for

a) overseeing all national tasks related to the development and implementation of PISA throughout the entire cycle

b) ensuring that tasks are carried out on schedule and in accordance with the specified international standards

c) communicating with the international contractor on all operational matters relating to the adjudicated entities for which the NPM is responsible.

PISA Operations Manuals – all manuals provided by the international contractors. Their preparation will be carried out by the international contractors and will describe procedures developed by the international contractors. The manuals will be prepared following consultation with participating entities, the OECD Secretariat, the Technical Advisory Group and other stakeholders.

PISA Connect – PISA Connect is the project website for PISA 2029 and is maintained by the Core A Contractor. It is the main channel for communication between the international contractors and participating national centres.

PISA Quality Monitor (PQM) – person(s) nominated by the *National Project Manager* and employed by the international contractors to monitor test administration quality in their participating entity.

PISA Target Population – students attending all schools located within the participating entity, and in grade 7 or higher. The "standard" PISA target population is further refined to its age basis: students between 15 years and 3 (completed) months and 16 years and 2 (completed) months at the beginning of the testing period.

- The PISA Desired Target Population is *agreed upon* through negotiation between the National Project Manager and the international contractors within the constraints imposed by the definition of the *PISA Target Population*.
- The PISA Defined Target Population is equivalent to the PISA Desired Target population in the schools that are listed on the school sampling frame.
- **Questionnaire Expert Group (QEG)** - A group of experts who are responsible for linking the policy objectives identified by the PGB with expertise in the relevant area. The QEG facilitates the consensus on content and technical issues raised by participating entities within the broader framework and objectives of the overall implementation strategy as well as providing subject-matter expertise to guide instrument development and review.

Quality - PISA has developed three inter-related aspects of quality: quality control mechanisms, quality monitoring procedures and quality assurance.

- **Quality control mechanisms** are used to ensure that data and procedures conform to the specifications in the Technical Standards.
- **Quality monitoring procedures** are used to evaluate whether Technical Standards have been achieved as planned. One quality monitoring procedure is PQM observation of test session activities during the Main Survey.
- **Quality assurance** is achieved during the data adjudication process, whereby issues that may compromise the quality of the data are reviewed and corrective actions are taken, if appropriate.

School Associate (SA) – a person at a school who acts as a liaison between the school and the national centre to prepare for the assessment and who administers the assessment to students on the day of the assessment.

School Co-ordinator (SC) – a person at a school who acts as a liaison between the school and the national centre to prepare for the assessment in the school.

School-level exclusions – international contractors' approved exclusion of schools from the sampling frame because of, for example:

- geographical inaccessibility
- extremely small school size
- all students in the school being within-school exclusions.

School-level materials – the key materials include:

- School Co-ordinator Manual and Test Administrator Manual (or School Associate Manual)
- Test administration scripts
- Key forms – Student List, Student Tracking Form and Session Report Form
- **SMEG – Subject Matter Expert Groups** are responsible for linking the policy objectives identified by the PGB with expertise in the relevant area. These groups

facilitate consensus on content and technical issues raised by participating entities within the broader framework and objectives of the overall implementation strategy as well as providing subject-matter expertise to guide instrument development and review.

Source versions of the assessment instruments are provided in English (and a French reference source) by the international contractors according to contractual specifications.

Structural adaptations to paper-based survey instruments (including cover pages) include:

- deletion of items from the instruments,
- addition of items to the instruments, and
- changes in the format of the existing items.

Structural adaptations to Excel templates such as input list for sampling, tracking forms and templates to export lists of sampled candidates consist of any changes to the data section of an Excel template associated with a particular template. This includes any changes to:

- column names, and
- single cells in the heading of the data worksheet or anywhere in other worksheets, that are populated by ACER Maple.

TAG- the Technical Advisory Group provides advice on the technical features of the assessment, including scaling and sampling methodologies, and contributes to ensuring the technical quality and integrity of the data.

Target cluster size – the number of students (or teachers, when applicable) that are to be sampled from schools where not all students (or teachers, when applicable) are to be included in the sample.

Test Administrator – a person who is trained by the national centre to administer the PISA test in schools. This person may be a Test Administrator or a School Associate (a School Co-ordinator who also has the role of a Test Administrator).

Testing period – the period of time during which data is collected in a participating entity.

Translation plan – documentation of all the processes that are intended to be used for all activities related to translation and languages. It will be negotiated between each national centre and the international contractors.

Within-school exclusions – potential exclusion of students from assessment within participating schools because of one of the following:

- They are functionally disabled in such a way that they cannot take the PISA test. Functionally disabled students are those with a moderate to severe permanent physical disability.
- They have a permanent cognitive, behavioural or emotional disability confirmed by qualified staff, meaning they cannot take the PISA test. These are students who are cognitively, behaviourally, or emotionally unable to follow even the general instructions of the assessment.

- They have insufficient assessment language experience to take the core PISA test. Students who have insufficient assessment language experience are those who meet **all** the following three criteria:
  - they are not native speakers of the assessment language,
  - they have limited proficiency in the assessment language, and
  - they have received less than one year of instruction in the assessment language.
- There are no materials available in the language in which the student is taught.
- They cannot be assessed for some other reason as *agreed upon*.

References

OECD/Eurostat/UNESCO Institute for Statistics (2015), *ISCED 2011 Operational Manual: Guidelines for Classifying National Education Programmes and Related Qualifications*, OECD Publishing, Paris, https://doi.org/10.1787/9789264228368-en. [1]

Organisation for Economic Co-operation and Development

EDU/PISA/GB(2025)27

For Official Use English text only

17 October 2025

DIRECTORATE FOR EDUCATION AND SKILLS
PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT

Governing Board

PISA 2029 INTERNATIONAL OPTIONS

60th meeting of the PISA Governing Board

12-14 November 2025
Tashkent, Uzbekistan

This document provides an overview of the international options for PISA 2029, cost estimates for participation and the timeline for registering.

The PGB is invited to:

- **REVIEW** the information about international options in PISA 2029.
- **NOTE** the cost estimates and timeline for signing up to the international options.

Andreas Schleicher, Director for Education and Skills and Special Advisor on Education Policy to OECD's Secretary-General (andreas.schleicher@oecd.org)

JT03574615

PISA 2029 International Options

1. International options are survey components that offer additional insights regarding target groups that are already part of PISA (in particular students), or expand PISA to target groups that are not part of the standard PISA assessment (in particular teachers and parents).

2. International options supplement the core components of PISA 2029, which are the assessments of reading, mathematics and science, the innovative domain Media and Artificial Intelligence Literacy (MAIL), and the student and school questionnaires.

3. The choice of international options in PISA 2029 follows the PISA Governing Board's decisions regarding PISA 2029 [EDU/PISA/GB(2023)2], and the strategy for international options in PISA, as agreed at the 47th PGB meeting [EDU/PISA/GB(2019)1].

4. PISA 2029 will offer four international options, which are presented in this document:

- Financial Literacy Student Assessment
- Emerging Policy Questionnaire
- Teacher Questionnaire
- Parent Questionnaire

Cost estimates and registration

5. The cost for the development and oversight of the international options is covered by the countries/economies that participate in the options. The more participants in an option, the lower the participation cost. This is because most of the price that countries/economies pay is used to cover the international contractor costs, which are composed of a fee per country/economy participant and a base fee that is shared among those same participants. As the contractor costs may vary from cycle to cycle, the participation fee structure may also vary.

6. As in previous cycles, the participation cost for the Financial Literacy Student Assessment is composed of a base fee that covers the marginal cost of the country/economy's participation, plus a scaled component for OECD/Associate members to cover the development cost for this cycle. The base fee in PISA 2029 is 50 000 EUR. For the three questionnaire options (Emerging Policy Questionnaire, Teacher Questionnaire and Parent Questionnaire), the fee is the same for all participants, as in previous cycles.

7. Table 1 shows the estimated cost of participation in each international option in PISA 2029. The exact costs will be communicated when the number of participating countries/economies has been established.

Table 1. Cost estimates for international options in PISA 2029

	Financial Literacy Student Assessment	Emerging Policy Questionnaire	Teacher Questionnaire	Parent Questionnaire
Minimum number of participants	10	10	10	10
Number of participants in previous cycle	20	n/a	17	18
Maximum cost (if minimum number of participants)	89 587 EUR on average*	17 488 EUR	33 758 EUR	22 704 EUR
Estimated cost (if same number of participants as in previous cycle)	**58 221 EUR on average** (expected range 50 000 - 75 000 EUR)*	**13 164 EUR****	**25 496 EUR**	**16 387 EUR**

Notes:
* For the Financial Literacy Student Assessment, the costs indicated are the average cost per country. The individual per-country cost will depend on the scaled contribution component. In the scenario with 20 participants, the cost per country will be in the range of 50 KEUR (for OECD members with the smallest scale component and non-Member countries) to 75 KEUR (for OECD countries with the largest scale component).
**As there is no previous number of participants for the Emerging Policy Questionnaire, the estimate is based on 20 participants.

8. Registration for the international options will happen in three phases:

- November 2025 – February 2026
  Expression of interest

  Countries/economies are asked to indicate their interest in each option by 28 February 2026, based on the cost estimates in this document.

- March – June 2026
  Firm commitment

  The cost estimates will be updated considering the initial expression of interest by March 2026. Countries/economies are then asked to provide their firm commitment to participate in each option by 30 June 2026.

- July – November 2026
  Signing of offer letter

  Countries/economies will sign an offer letter to the OECD for the amount due for their participation in the international options, according to their firm commitment provided in June 2026.

Financial Literacy Assessment

Overall description

9. The PISA Financial Literacy Assessment is the only co-ordinated assessment of the Financial Literacy of students around the world. It provides information on the Financial Literacy levels of 15-year-old students and on their financial attitudes and behaviour, access to and use of basic financial products and services, and exposure to financial education in school.

10. The 2029 round will constitute the fifth optional assessment of Financial Literacy in PISA. Overall, 38 countries and economies have participated in one or more Financial Literacy Assessments since 2012.

11. A number of new developments in financial markets are expected to be especially relevant for young people in the coming years, which will be taken into account in the revision of the Financial Literacy Assessment for PISA 2029. These include:

- the development of new financial products aimed at children and young people
- the increased reliance of both customers and providers on artificial intelligence for financial decision-making
- the surge in incidence, complexity and severity of financial scams and frauds

Sample and implementation

12. The Financial Literacy Student Assessment is composed of a cognitive assessment and additional questionnaire module for students. The one-hour cognitive assessment requires an additional sample, which in PISA 2022 was 1 650 students per country/economy, enrolled at the same schools selected for the main PISA sample. It is expected that the sample size for this option will be similar for PISA 2029. Due to the additional sample, the length of the cognitive test remains unchanged for countries/economies that participate in Financial Literacy. The questionnaire module will add around 10 minutes to the student questionnaire.

Further reading

13. A list of all previous participants and overview of the most recent policy findings from the PISA Financial Literacy Assessment can be found in EDU/PISA/GB(2025)10.

14. A draft assessment framework for PISA 2029 Financial Literacy can be found in [EDU/PISA/GB(2025)26].

Emerging Policy Questionnaire

Overall description

15. The Emerging Policy Questionnaire is a new questionnaire module for students in PISA. It aims to measure constructs new to PISA, in terms of their substantive areas and/or formats, for possible future inclusion in the main student questionnaire, or to offer more comprehensive questionnaire modules on policy relevant topics that are already covered to some extent but not fully covered by the core questionnaire. The length of the Emerging Policy Questionnaire will be equivalent to around 10 additional minutes of response time for the student questionnaire.

16. Based on the selected policy priorities, it is recommended at the 59th PGB meeting [EDU/PISA/GB(2025)6] that the Emerging Policy Questionnaire focuses on six key content areas:

- student and collective agency, by expanding existing questions to include students' involvement in school and community issues
- school attendance and absenteeism, with new questions addressing long-term absences while maintaining trend data
- student assignment to academic tracks and groupings, through questions on how students are placed into different instructional programmes or ability groups
- school support for psychological well-being, including student access to mental health services
- cyberbullying, with questions assessing experiences as victims or perpetrators
- students' motivation to learn, with comprehensive coverage of both school-related and general learning motivation using existing or new items

Sample and implementation

17. The Emerging Policy Questionnaire does not require any additional sample. The 10-minute questionnaire module will be added to the student questionnaire for all students in countries that participate in this option.

Further reading

18. Further details on the expected constructs for the Emerging Policy Questionnaire can be found in the draft Questionnaire Framework for PISA 2029 [EDU/PISA/GB(2025)23].

Teacher Questionnaire

Overall description

19. By supplementing students' PISA results with data from their teachers, the PISA Teacher Questionnaire provides broader information on the teaching activities and environments in which students learn. The Teacher Questionnaire was offered for the first time in PISA 2015 in response to a growing interest in teacher-related policies.

20. The PISA 2029 Teacher Questionnaire is expected to include questions on the teachers' background and professional development, their attitudes to student learning, and their teaching practices, with a specific focus on the teaching and learning of reading skills, which is a focus area in PISA 2029.

21. In line with the revised PISA 2029 Reading Framework, the teacher questionnaire will assess several constructs related to reading instruction. These include teaching strategies that support comprehension and critical evaluation of texts, opportunities to learn through task understanding and multiple-text comprehension, and sourcing strategies such as misinformation detection and lateral reading. It will also measure teachers' use of ICT in language instruction, including AI integration, and their role in developing students' reading strategies like evaluating arguments and identifying textual similarities. A new construct on disciplinary-specific literacy will be introduced, with items in both the test language and general teacher questionnaires, capturing how literacy is taught across subjects such as science and literature.

Sample and implementation

22. The Teacher Questionnaire will be administered to all eligible teachers in the schools that are sampled to participate in PISA (no within-school sampling of teachers). The questionnaire will be highly focused and shorter than in previous cycles (around 15-20 minutes) to facilitate higher response rates. The questionnaire is computer-based and will be administered online.

23. Information from sampled teachers can only be linked to students at the school level, as there is no linkage between individual students and individual teachers. There is no plan to develop teacher weights in PISA 2029, because the primary aim of the Teacher Questionnaire is to describe students' learning environments rather than describe the teacher population.

Further reading

24. More information about the expected content areas for the Teacher Questionnaire can be found in the draft Questionnaire Framework for PISA 2029 [EDU/PISA/GB(2025)23].

Parent Questionnaire

Overall description

25. PISA's Parent Questionnaire collects information from the parents to the students that participate in PISA. The questionnaire includes topics such as parents' support to and engagement with the child's learning and homework, out-of-school learning settings, as well as more direct measures of the parents' background and home resources that can impact student learning.

26. The Parent Questionnaire can provide valuable insights into parents' attitudes and beliefs that are related to students' learning and development. It will also include items related to reading – such as engagement, preferences, support and social motives – mirroring constructs from the Student Questionnaire. Additionally, it can explore parents' views on failure and intelligence, which shape children's mindsets and motivation. Selected reading-related constructs from the PISA 2018 Parent Questionnaire will be included in PISA 2029 to monitor changes in home learning environments over time.

27. Furthermore, innovations introduced in the Media and Artificial Intelligence Literacy (MAIL) Framework may also be incorporated into the Parent Questionnaire. These could include topics such as parents' open-minded thinking, susceptibility to misinformation and attitudes toward AI.

Sample and implementation

28. The questionnaire is administered to the parents of all students that participate in PISA in the country/economy. As a new development, countries/economies will be able to choose whether to administer the questionnaire in paper form (as in previous cycles) or online to parents. It is estimated to take around 20 minutes to fill in the questionnaire.

Further reading

29. More information about the expected content areas for the Parent Questionnaire can be found in the draft Questionnaire Framework for PISA 2029 [EDU/PISA/GB(2025)23].

Navigating an Evolving Digital World*

*First draft of the PISA 2029 Media and Artificial Intelligence Literacy (MAIL) Assessment Framework

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Acknowledgments

This first draft of the PISA 2029 Media and Artificial Intelligence Literacy (MAIL) Assessment Framework was developed by the OECD Secretariat (Luis Francisco Vargas-Madriz and Mario Piacentini) and the following members of the MAIL Expert Group: Catherine Adams (University of Alberta), Samuel Greiff (Technical University of Munich), Renee Hobbs (University of Rhode Island), Panayiota Kendeou (University of Minnesota), Emlen Metz (University of California—Berkeley) and Jon Roozenbeek (University of Cambridge).

The authors acknowledge the helpful feedback from Andreas Schleicher (OECD) and from the countries and economies participating in PISA.

Note to the Reader

The following document is a preliminary draft.

The PISA 2029 Media and Artificial Intelligence Literacy (MAIL) will be subject to revisions before the final version is released.

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01.

Introduction

Young people around the world engage daily with media platforms to seek information, explore a variety of topics, and interact and collaborate with others (Leadbeater and Miller, 2004[1]). The increasing use of media platforms is profoundly transforming society and popular culture (Hilbert, 2020[2]), empowering individuals not only to consume but also to generate media and online content. Today, digital tools, media and technology are embedded in almost every facet of daily life, influencing both public and private spheres (Burns and Gottschalk, 2019[3]).

The growing use of platforms that allow sharing and interaction through videos, music, blogs, articles, podcasts and direct communication has fostered greater opportunities for freedom of expression, collaborative knowledge creation, and citizens' engagement (Backstrom et al., 2006[4]). Today it is easier than ever for people to organise themselves with the purpose to engage in social, cultural and political action with the assistance of media platforms (Kizgin et al., 2019[5]). There is an additional excitement around artificial intelligence (AI) due to its simplicity, intuitiveness and ability to create digital media messages – including text, images, audio, videos – in seconds (Fosco et al., 2022[6]).

The integration of media platforms within education has similarly unlocked a wide range of opportunities. These tools empower students to access information quickly, collaborate across geographical distances, and contribute to knowledge creation – which in turn may foster creativity, critical thinking and civic engagement (Gonzalez-Mohino et al., 2023[7]). Media platforms have also fundamentally transformed the way education is delivered, supporting remote and hybrid models, innovative pedagogies and continuous feedback regardless of location. This shift breaks down traditional barriers and redefines the classroom experience for both learners and educators. In addition, these platforms enable more personalised and flexible learning experiences, and tailored instruction to diverse student needs (Schmid, Pauli and Petko, 2022[8]).

However, alongside the advantages offered by media platforms and AI systems there are also notable challenges. Most notably, information available online is not always reliable, as media messages are produced and disseminated for different motives – including entertainment, persuasion, or profit. Additionally, the drive to prioritise rapid publication to meet web traffic demands may lead to diminished content quality and to dissemination of misinformation (Chalaby, 2000[9]).

These challenges are only exacerbated by the rapid advances in AI systems, which make it easier and faster to produce deceptively realistic content, and which often provide students with error-filled or inappropriate responses (Trattner et al., 2022[10]; Fulsher, Pagkratidou and Kendeou, 2025[11]). Students may also get exposed to a variety of other dangers including cyberbullying, identity theft, invasion of privacy, defamation and/or online grooming across media platforms (O'Reilly, 2020[12]).

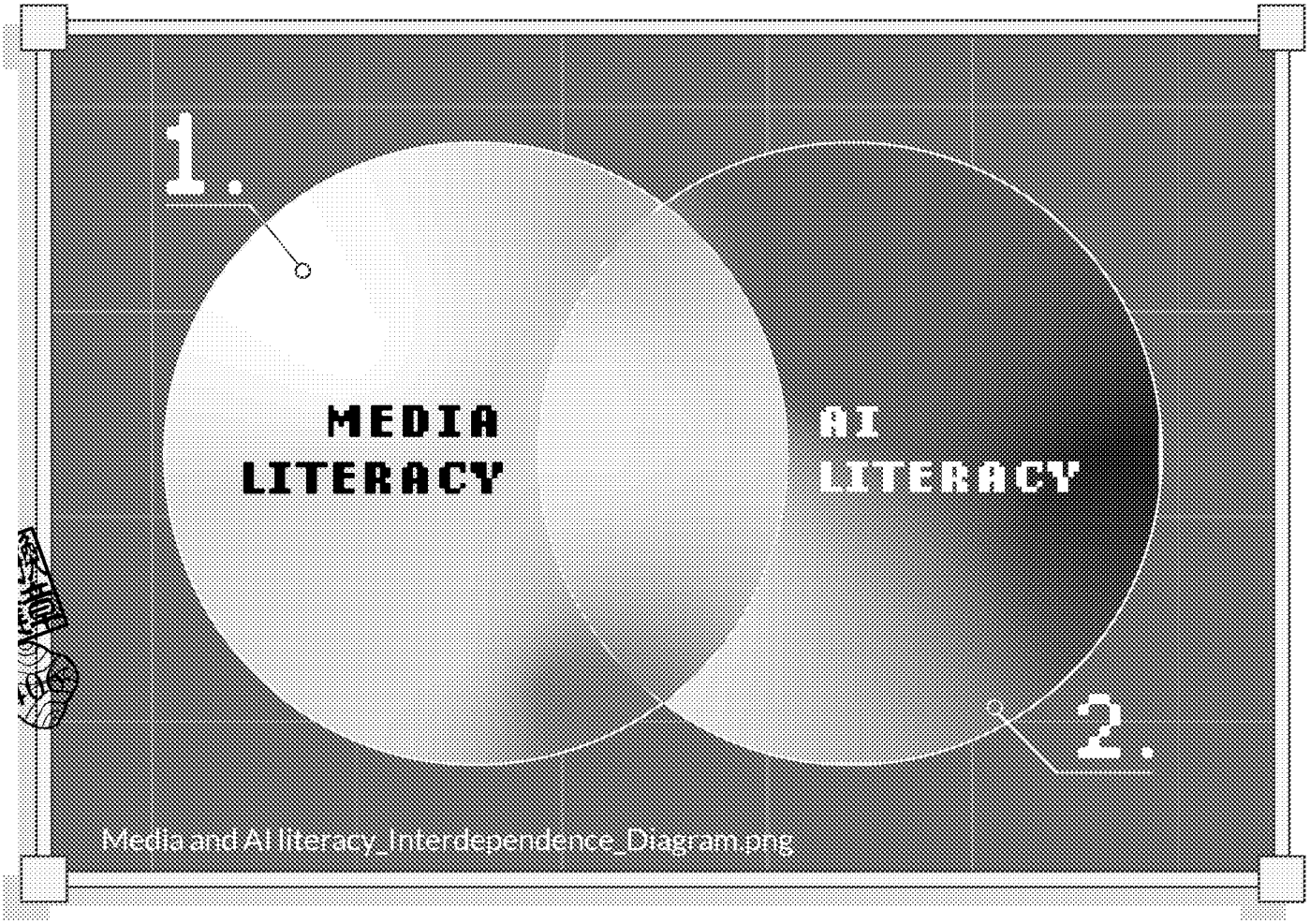
In the field of education, there are also concerns about plagiarism, the authenticity of student work, and ongoing debates whether allowing students to use these tools is pedagogically appropriate (Kosmyna et al., 2025[13]) or academically fair (Tlili et al., 2023[14]). As AI systems continue to influence educational practices, questions persist regarding the fundamentally changing competences required of students, and whether greater emphasis should be given to competences like critical and ethical thinking that could help guide students to decide when and how to use AI systems (Nygren, 2025[15]).

The fundamental step for tackling these challenges, while grasping the new opportunities these tools afford, is to develop Media and AI Literacy. These competences are vital in today's world as they equip individuals with crucial skills to evaluate the credibility, quality and purpose of media messages, supporting them to take well-informed and responsible actions as they participate in society (Livingstone, 2004[16]; Karaduman, 2015[17]).

In a digital world where media platforms serve both as communication channels and repositories of personal data, Media and AI Literacy also empowers users to safeguard their privacy and promote their well-being (Schreurs and Vandenbosch, 2021[23]) (Park, 2013[24]).

Naturally, efforts to nurture these competences are growing (Adams et al., 2023[25]; Hill, 2022[26]). Examples include the integration of media literacy into education curricula (e.g. Finland), the development of applications and games for AI literacy extra-curricular activities (e.g. AI Campus or Hour of AI by Code.org), and the creation of international competency frameworks (e.g. DigComp). These efforts show that Media and AI Literacy can be taught transversally across various subject areas and disciplines.

It is thus essential to continuously monitor the real-world effectiveness of these initiatives given the significant implications involved in their implementation (Roozenbeek, Remshard and Kyrychenko, 2024[27]). The new PISA Assessment of Media and AI Literacy (MAIL) represents a valuable tool to provide insights into the extent to which young students have acquired the skills necessary to engage proactively and critically within environments increasingly influenced by media platforms and AI systems.



Media and AI literacy_Interdependence_Diagram.png

Box 1.1. The Interdependence of Media and AI Literacy

1. Media literacy is the ability to access, comprehend, analyse, and create media, while reflecting on its impact on individuals, institutions and society. At the core of media literacy lies the critical thinking skills needed for engaging with, understanding, assessing, and filtering the images, words, and sounds encountered through books, newspapers, magazines, radio, television, video games, the Internet and social media. Today, digital technology and AI systems are embedded across all forms of media as central elements of the media landscape.

2. AI literacy represents the technical knowledge, durable skills and future-ready attitudes required to thrive in a world influenced by AI systems. It enables learners to engage, create with, manage and shape AI, while critically evaluating its benefits, risks and ethical implications (OECD, 2025[18]).

Box 1.1. The Interdependence of Media and AI Literacy

The current media landscape faces "a crisis of information" permeated by "largely invisible algorithms and increasingly invisible information systems" (Haider and Sundin, 2022, p. 9[19]). From automated news articles to AI-generated images and videos, these systems can shape the narrative, select visuals and determine the tone of the message with minimal human oversight.

Media literacy without AI literacy thus risks becoming outdated in today's rapidly evolving digital landscape. Without an understanding of how AI curates, generates, impacts, and amplifies content, media literacy efforts may overlook the subtle yet powerful ways technology filters and frames reality, leaving critical gaps in the ability to discern authenticity and bias.

At the same time, when AI literacy is not considered in an inter-disciplinary and broad manner risks becoming rather technical and disconnected from the broader social, cultural and ethical context in which media messages are constructed and received. In other words, understanding how AI systems function is valuable, but without the tools to critically evaluate the narratives, representations, and biases these systems propagate, learners may fail to fully understand how AI outputs are shaping meaning and influencing public perception.

Therefore, AI literacy intersects with media literacy because of how AI generates digital content (i.e. text, image, sound, music and video), transforming media production; how AI curates information flows through recommendation systems, shaping learners media consumption, thus shaping what learners see and know; and how AI itself functions as a medium or environment (e.g. conversational agents, and friendship chatbots), mediating learners' social and emotional life.

Nonetheless, one important caveat still remains: while media literacy benefits from an established disciplinary knowledge base (Hobbs, 2025[20]), AI literacy is a relatively new field (Gu and Ericson, 2025[21]; Ng et al., 2021[22]). The jointly developed European Commission-OECD AI Literacy Framework (OECD, 2025[18]) offers a common understanding of the competences students in primary and secondary education need in a world increasingly influenced by AI systems, and to support education systems in integrating AI literacy across subjects and grade levels.

In addition, the PISA 2029 MAIL Assessment aims to measure to what extent learners can critically navigate this digital media landscape that is increasingly influenced by AI systems. Although there are naturally occurring synergies between the two – given the intersection of AI systems and media platforms – the EC-OECD AI Literacy Framework offers a more targeted approach focusing on the domain of AI – including more technical understanding of different types of AI systems, and their application to non-media environments – which helps to inform the AI competences in the MAIL assessment. Nonetheless, the PISA 2029 MAIL Assessment Framework takes a broader approach to media literacy in the context of the advancements of AI systems, and being designed to inform an international data collection, also goes more in depth in defining measurement strategies and tools.

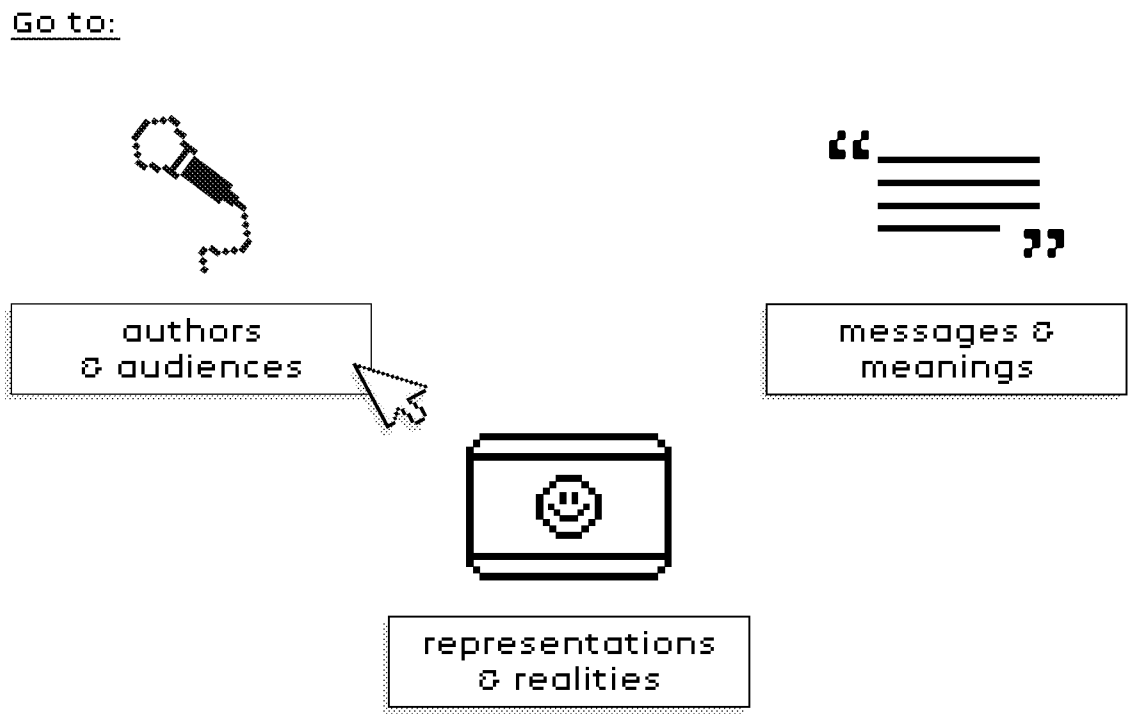
02.

The key concepts of Media and AI Literacy

The rise of digital and now AI technologies have fundamentally disrupted and reshaped the media landscape. This shift has not only transformed the entertainment and media industries, but also the very needs and expectations of individuals – as both consumers and creators of information, entertainment and persuasive messages (Lotz, 2021[28]).

The omnipresence of screens – from smartphones and tablets to laptops and smart TVs – has changed the rhythms of family life and created new social expectations (Introna and Ilharco, 2006[29]). The rapid advancement of algorithmic and AI personalisation further complicates this media environment (Holmes et al., 2025[30]), and has fragmented audiences, fostered the emergence of echo chambers and filter bubbles (Habermas, 2022[31]), and made it easier to monetise attention (Agrawal, Gans and Goldfarb, 2022[32]).

For children and young people – whose engagement with digital content is both intense and formative – Media and AI Literacy pedagogies are a form of culturally responsive teaching that engages students because it connects with their lived experiences (Trope, 2021[33]). To cultivate these essential literacies, it is crucial to examine three interconnected dimensions at the heart of media and AI engagement: the roles of authors and audiences, the construction and interpretation of messages and meanings, and the ways in which representations reflect and distort realities.



2.1. Authors and Audiences

Table 2.1. Big Ideas about Authors and Audiences

Media literacy ideas		AI literacy contributions to Media literacy ideas
Authors create media messages for different purposes and target specific audiences.	»	AI-generated messages are produced through human-machine collaboration. Data, design, and user input shape both purpose and audience.
Socio-economic and cultural context matters in how authors create messages and audiences interpret them.	»	Socio-economic and cultural context shape how people prompt, interpret, and respond to AI-generated outputs.
Economic and political forces shape the power, incentives, and constraints affecting media creators and audiences.	»	The technology industry, driven by economic and political interests, shapes how AI systems are developed and deployed, and influences how people access, create and share information.

In today's world, anyone can assume the role of an author. Professional media producers, influencers and developers of AI systems craft messages and platforms for specific purposes, and often for specific audiences, as every digital interaction becomes commodified (Center for Humane Technology, 2021[34]).

The creators' intentions may range from informing, entertaining, or persuading, to collecting data for commercial gain or influencing public opinion. Thinking of authors and audiences requires learners to consider not only who authors a message or shapes an AI system, but also the broader political, economic, regulatory and business contexts in which these systems operate (Napoli, 2012[35]). Knowing about these structures helps learners critically evaluate why and how messages circulate and evaluate how power dynamics influence both creation and interpretation.

Nonetheless, audiences are not passive recipients. Every media or AI interface is interpreted through the diverse lenses of individual background, culture and experience. Audiences may also respond to media messages in unexpected ways, remixing their content, or even subverting the intended meanings. This dynamic interplay between authors and audiences underlines the importance of interrogating not just what is said or shown, but also for whom and why.

This questioning is crucial considering that young people are among the earliest and most enthusiastic adopters of media platforms – often embedded with AI systems. This rapid adoption brings risks: beyond concerns about exposure to inappropriate content or digital dependence, there are also substantial issues related to persuasive techniques, privacy and surveillance that users may not fully understand (Christakis and Hale, 2025[36]).

Ultimately, both authors and audiences shape and are shaped by these dynamics: creators bring their intentions, backgrounds, and perspectives to the messages they produce, while audiences actively interpret and negotiate meaning based on their own experiences and contexts. This means that an assessment of Media and AI Literacy should invite students to reflect on the complex social, cultural, historical and technological processes that influence authors and audiences (Kellner and Share, 2019[37]).

2.2. Messages and Meanings

Table 2.2. Big Ideas about Messages and Meanings

Media Literacy Ideas	AI Literacy Contributions to Media Literacy Ideas
Media messages are constructed to inform, entertain and/or persuade.	AI systems generate, filter, and personalise media messages, and shape how people access and experience information, entertainment and persuasion.
Media messages contain values, ideology and specific points of view.	The training data and design choices underlying AI systems embed values and biases that shape the outputs that users receive.
Media messages affect people's beliefs, attitudes and behaviours	AI systems influence people's beliefs, attitudes, and behaviours through the way they filter, personalise and present information.

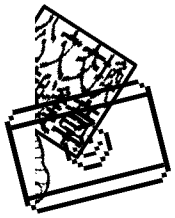
Media messages are not only vehicles for information or entertainment, but they are also powerful instruments of influence. Authors invest time and resources in crafting messages that achieve specific goals, recognising that messages can sway beliefs, attitudes, and behaviours. The impact of such a message may be fleeting or profound, but it may shape how individuals see themselves, their communities and the broader society (Pangrazio and Sefton-Green, 2021[38]).

Therefore, the construction of messages – whether by humans or AI systems – is a deliberate process modelled by production techniques, symbolic choices, and strategic intent. In this context, authors engage in a range of tools to encode meaning (Jiang, Vetter and Lucia, 2024[39]).For example, in a photo, the use of colour, lighting, distance from the lens and the position of the subject depicted may all be strategic choices deployed by the photographer. In a film, dialogue, characters, plot, action and special effects are production elements that help the filmmaker accomplish the purpose of narrative storytelling. In writing, an author uses sentence structure, vocabulary and narrative devices to develop ideas.

In generative AI (GenAI) systems, humans design and train complex machine learning algorithms that analyse vast datasets of existing content (i.e. text, audio, video, images and code) to learn statistical patterns and relationships. Using these learned patterns, the AI system generates new content by predicting what is most likely to come next, producing results that feel both familiar and novel, and are influenced by the design choices of the human developers (Klein et al., 2025[40]).

However, not only production, but also reception, shape how a message's symbols and signals are interpreted. Every communicative act – whether it strives for neutrality or not (Klein et al., 2025[40]) – carries embedded values, points of view and ideological leanings (Vraga and Tully, 2019[41]). Meaning is not a fixed property embedded in the message itself but emerges through active interpretation by audiences.

To interpret messages critically, learners must be equipped to recognise the strategies used to construct and convey meaning, to question whose interests are served, and to identify cues or patterns that may signal manipulation or bias. This includes analysing the rhetorical, visual, and algorithmic techniques employed, as well as understanding what messages are being filtered out by AI systems and how AI-generated content can intentionally or inadvertently reinforce certain ideologies or values (Fazio et al., 2024[42]; Hu et al., 2024[43]). This means that an assessment of Media and AI Literacy should include realistic reflections on the underlying decisions about what has been included, highlighted and omitted from media messages.



2.3. Realities and Representations

Table 2.3. Big Ideas about Representations and Realities

Media literacy ideas		AI literacy contributions to media literacy ideas
Media messages are selective representations of reality.	»	AI-generated messages are constructed representations of reality shaped by both human choices and machine processes
Media messages tend to use generalizations to express ideas and information.	»	AI systems and AI-generated content encode and amplify biases present in their training data and design choices.
The credibility of media messages is judged using features like authority and authenticity.	»	The credibility and trustworthiness of AI systems is judged by using features like transparency and explainability.

Messages are selective representations of reality. Media and AI-generated messages powerfully influence our perceptions of reality by constructing selective – and sometimes fully fabricated – representations of the world through symbols, images, and narratives that serve as stand-ins for complex realities that cannot be fully captured (Lippmann, 2018/1922[44]). Media messages are thus all inherently incomplete, since no message can encompass the full richness or nuance of lived experience or capture the complexity of real events. The boundaries between symbol and reality are often blurred, making it easy to mistake representations for reality itself.

Therefore, media and AI-generated messages are not mere windows onto the world, they are curated, edited, and often strategically crafted representations, reflecting social, cultural, and historical pressures, as well as ideological interests, and power dynamics (Hall, 2009[45]). Stereotypes, for example, provide a convenient shorthand for portraying groups, events, or ideas. Filmmakers and writers may use stereotypes because they provide an effective shorthand for depicting personalities, relationships, events and experiences quickly. However, these simplifications also risk distorting our understanding and perpetuating social harm (Arendt, 2013[46]).

This situation is further complicated when AI systems, trained on massive datasets shaped by historical prejudices, inadvertently perpetuate or even amplify existing stereotypes in their outputs. Photorealistic deepfakes, generative text, and other synthetic messages can construct convincing – but altered or entirely fabricated realities. AI systems may also not fully capture the nuances of different languages (i.e. when employing sarcasm for social commentary in small local languages) and present these simplifications as authoritative or "real". As many individuals frequently rely on these mediated depictions, especially when lacking firsthand experience.

In this context, the credibility of both human- and AI-generated media messages is assessed using cues like authenticity, expertise, trustworthiness, and authority – qualities that are themselves constructed through community norms and technological practices. Thus, an assessment of Media and AI Literacy should include realistic ways in which individuals question the reality presented to them, scrutinise who is shaping these narratives, and understand how certain groups or perspectives may be privileged or marginalised.

03.

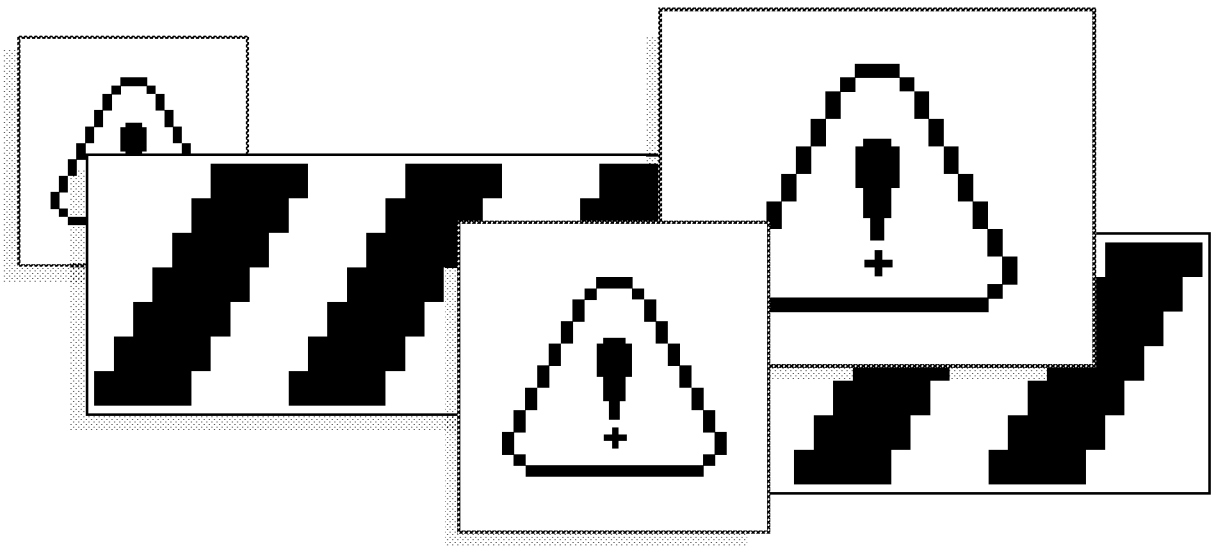
How Media and AI Literacy Addresses Risks and Leverages Opportunities in an Evolving Digital World

3.1. Media and AI Generate Different Types of Risks for Learners

The rapid changes in digital media, especially with AI-driven creation and distribution, have amplified some already existing risks and challenges. At a personal level, smartphone and Internet use, as well as the use of AI-driven platforms, expose users to a variety of intentional and unintentional risky online experiences, and reveal increasing risks associated with cognitive offloading, encompassing a wide spectrum of online activities that affect psychological, social, cognitive and physical development and well being. Furthermore, the addictive nature of some online videogames and personalised feeds on social media platforms, and the emotional impact of algorithmic manipulation or deep fakes, can erode social connections and trust, foster anxiety, and thus challenge healthy development. (Machackova, 2024[47]).

Exploiting people's lack of digital, media and AI competence has also become a growing industry as cyber-attackers use malware, other strategies to target vulnerable users like scams. AI can automate and scale phishing scams, deepfake-based fraud and malware attacks, using algorithmic targeting to amplify virality (Chergarova et al., 2022[48]; Lin et al., 2024[49]). These types of campaigns could potentially sway public opinion, influence elections, destabilise democracies and exploit societal divisions (Ecker et al., 2025[50]) – often with remarkable speed and reach (DiResta, 2024[51]). These vulnerabilities to cyber-attacks are not distributed equally: traditional divides based on gender, age and education persist, with marginalised groups at greater risk (Dodel and Mesch, 2018[52]). In this context, the power of the companies operating media platforms and AI systems has increased.

Furthermore, the personalisation and curation of digital content by a handful of dominant platforms, increasingly shaped by AI systems, narrows the diversity of viewpoints and reduces exposure to alternative perspectives (Zuboff, 2019[53]). Recommendation systems – that are almost always proprietary – can reinforce echo chambers, filter out dissenting information, and push users toward synthetic realities curated to their existing beliefs or consumer profiles. This concentration challenges governments to maintain democratic integrity and a free, open media ecosystem (European Commission, 2020a[54]).



3.2. Media and AI Literacy as an Urgent Need to Address these Risks

The changing media landscape introduces urgent questions and opportunities for education (European Commission, 2020b[55]). Education systems now need to reflect on how to ensure that all students are equipped with the skills and mindsets needed to thrive in a mediatised digital society, how to foster responsible and effective participation in online communities, how to encourage thoughtful engagement with diverse viewpoints, and how to support the creative use of digital media for problem-solving and global understanding (Jenkins et al., 2009[56]).

Media and AI literacy has become essential for questioning what is "real", interrogating whose interests are served, and developing the critical faculties needed to navigate and help define the mediated realities of our time. In today's world, critical analysis of media messages, media platforms, and AI systems leads people to be more aware of the constructed nature of knowledge and their incomplete understanding (Park et al., 2023[57]). It supports young people to deal with the overwhelming abundance of information adopting strategies like selective filtering and deliberately blocking or tuning out low-quality or misleading content (Kozyreva et al., 2023[58]), without losing sight of what happens around them.

Media and AI Literacy can increase students' engagement with schooling, as learners perceive it to be relevant to their lived experience with media and popular culture (Martens and Hobbs, 2015[59]). Approaches that integrate media and AI literacy in education have also been found to increase engagement with political, social and cultural issues (Kahne and Bowyer, 2019[60]), and to help learners to be critical about news and current events (Hobbs et al., 2013[61]). In general, the more active people are online, interacting with digital content or other people, the more likely they are engage in civic activities (Park et al., 2023[57]).

Box 3.1. Example Media and AI Literacy Questions

Authors and Audiences:

- Who or what created this message? Was AI involved, and if so, at what stage (generation, editing, curation)?
- Who is the audience and how might AI have tailored this content to reach them?
- Who benefits from it, including AI companies, media platforms, or media collectors?

Messages and Meanings:

- Why am I seeing this message, did an algorithm select or recommend it to me?
- What is the purpose, and how might AI systems have shaped this purpose?
- How can this message or output be interpreted, and what biases may be amplifying?

Representations and Realities:

- How was this work created, what mix of human and machine processes may have been involved?
- What data or sources might the author or AI systems have drawn from to create this?
- How are values, ideologies and points of view represented?
- How might AI's role in creation affect the credibility or authenticity of this message?

3.3. How Media and AI literacy Connects to Other Competences

Media and AI literacy requires strong foundational knowledge and skills. It is not possible to expect that students can exercise critical thinking, creative expression, ethical judgement, social responsibility, or citizenship engagement if they are not fluent readers, have solid scientific and mathematics foundations, have in-depth knowledge of scientific critical thinking, and have had exposure to a diverse set of knowledge, key ideas and practices in the social sciences and the humanities (Macgilchrist, 2021[62]; Kasneci et al., 2023[63]). Media and AI literacy is therefore a cross-domain topic relevant in all school subjects. Teaching needs to then foster inquiry-based learning approaches helps nurture adaptive, active and creative minds, empowering learners to engage in critical and innovative problem-solving. Practising and developing digital skills and computational thinking also represent an important requirement for students to develop Media and AI literacy.

Media and AI literacy instruction can be connected to all disciplinary areas that are present in modern curricula. **Table 3.1** presents several example activities that demonstrate how Media and AI Literacy could be connected to different subjects. What is common across these activities is the need to use active, inquiry-based learning subjects. Teaching needs to also foster inquiry-based learning approaches helps nurture adaptive, active, and creative minds, empowering learners to engage in critical and innovative problem-solving approaches that invite learners to question information, reflect on the nature of the media platforms and AI systems they use, how these create messages with meanings, and how these alter representations of reality.

Reading, in particular, has a strong connection with Media and AI Literacy. Although there is clear overlap in the critical thinking, evaluative, and reflective skills required for both domains, their distinct purposes and emphases that warrant explanation. **Box 3.2** describes the connections between the two domains.

Beyond foundational literacies and digital skills, Media and AI literacy is supported by social-emotional competences that allow learners to meaningfully navigate, interpret and shape the digital worlds they inhabit. For instance, learners need self-awareness to reflect on their digital habits and how that makes them feel; developing self-management may help students regulate their online behaviours and make thoughtful choices about how they engage with media platforms and AI systems. In addition, social awareness is crucial to help students understand how media and AI-generated messages might impact various communities. Similarly, nurturing relationship skills may help learners communicate respectfully on media platforms, particularly when discussing some of the ethical issues related to the use of AI systems. Lastly, responsible decision-making is essential for evaluating the credibility of online information, anticipating the potential consequences of sharing AI-generated content, and making informed choices that reflect both personal values and the broader impact on society. **Table 3.2** shows how Media and AI Literacy connects and could strengthen the social and emotional skills that students need to thrive.

go to Table 3.1 | go to Table 3.2 | go to Box 3.2

Table 3.1. How Media and AI Literacy Connect to Educational Subjects

Subject	Example Connecting Activities
Reading	› Reflect on how media platforms and AI systems personalise news feeds in ways that may affect people's interpretation of current events › Compare journalistic accounts of current events with AI-generated summaries to identify potential differences in tone, bias, or emphasis
Mathematics	› Examine how algorithms target advertisements based on user data › Investigate the role of data sampling and bias in AI predictions regarding social media engagement
Science	› Explore how different types of media depict climate change scenarios and consider the impact of media representation on public opinion › Discuss the ethical implications of AI in scientific research by examining media coverage of AI breakthroughs and controversies
History	› Evaluate the veracity of primary and secondary sources › Assess how photography and fiction films influence people's understanding of historical events › Debate the impact of deepfakes and other AI-generated content on the authenticity of historical evidence in digital and traditional media
Geography	› Evaluate the influence of AI-curated media on public perceptions of global issues like migration or natural disasters › Use mapping tools to analyse media coverage of different regions and identify potential biases
Foreign Languages	› Compare media messages about the same international event across news sources in different languages to examine tone, point of view, and bias › Analyse social media memes and interpret how wordplay and images create meaning and ambiguity
Arts	› Experiment with the use of digital platforms and AI systems to create art and discover how audiences perceive the value of AI-created pieces › Examine the copyright issues concerning human-machine collaboration and reflect on cultural understandings of the nature of creativity and originality
Computer Science	› Develop a simple AI model to recommend media content and reflect on the potential biases introduced by the data selected for training › Reflect on the positions of various stakeholders (consumers, platforms, governments) in assessing the impact of AI systems that curate media content

Box 3.2. Connections between Reading and MAIL PISA Domains

Although there are significant synergies between MAIL and Reading, some competences are labelled the same in both PISA frameworks. However, several key differences distinguish the two domains. MAIL places a stronger emphasis on the creation of media artifacts, encouraging users to produce and interact with a more diverse range of media formats beyond texts (e.g. multimodal and video content). In contrast, Reading is more concerned with the inclusion of written texts, although the assessment will also include some multimodal texts and incorporate AI-generated texts.

Another notable distinction lies in the tools and processes each domain prioritises. MAIL provides users with a broader array of searching and browsing tools, explicitly focusing on querying and navigating through various types of media. The query function and specific AI affordances (e.g. interaction with chatbots) will not be part of the reading assessment.

Both MAIL and Reading encourage critical thinking about form, content, and the veracity of information. Even though these evaluation processes are central to both MAIL and Reading, the assessment of students' evaluation processes in these domains will be tied to the specific affordances of each domain. For example, evaluation processes in MAIL will be assessed while considering specific media and AI system affordances (i.e. algorithms, gen-AI chatbot interactions, search querying). Thus, MAIL will focus more on reflective practices that are more attuned to ethical and responsible issues, particularly in the context of media creation and digital interaction. In Reading, evaluation processes emphasise text comprehension and analysis, such as identifying inconsistencies or conflicts within and between texts, corroborating information across multiple texts, and analysing written arguments

Finally, while both domains consider the importance of monitoring and awareness, they differ in the types of conflict they address. MAIL is more focused on interpersonal or interactional conflict that may arise through media engagement, whereas Reading is concerned with conflicts or contradictions that occur within textual content. These differences highlight the unique contributions each domain makes to PISA 2029, and to the broader landscape of information, Media and AI Literacy.

Table 3.2. How Media and AI Literacy Connects to Social and Emotional Competences

Dimension	Example Connecting Activities
Self-Awareness	› Recognise and name one's own emotions when responding to online news or media content › Identify personal strengths and areas for growth when engaging with known and new media platforms and AI systems
Self-Management	› Manage stress and staying calm when facing challenging discussions about controversial media topics › Set personal goals for responsible technology use
Social Awareness	› Demonstrate empathy by considering how media and AI-generated messages may affect different communities › Reflect on cultural differences when comparing international news stories in multiple languages
Relationship Skills	› Collaborate with classmates to create digital artwork using media platforms and AI systems while respecting everyone's input › Communicate respectfully when debating the ethical implications of AI systems in media
Responsible Decision-Making	› Evaluate the credibility of online information before using it to inform decisions or sharing it with others › Reflect on the potential consequences of using AI-driven tools to create or spread media content

Although there is growing support for Media and AI Literacy pedagogies among policymakers, educators, and community leaders, full implementation is still quite difficult to scale (Bateman and Jackson, 2024[64]). Many schools lack sufficient resources and digital devices which makes access to media literacy opportunities challenging; many teacher professional learning and development programmes do not include comprehensive content on media literacy, which in turn makes teachers feel less prepared to integrate these competences across diverse subjects-especially as AI systems continue to quickly evolve (Chen, Salleh and Salleh, 2025[65]). Education systems must then rise to the challenge by embedding the principles of Media and AI Literacy across curricula, ensuring equitable access to resources, and supporting ongoing teacher professional learning and development (PLD).

04.

The Definition of Media and AI Literacy in PISA

Definition of M.A.I.L

The PISA 2029 Innovate Domain Assessment defines Media and Artificial Intelligence Literacy (MAIL) as a set of competences required to engage effectively, ethically and responsibly with digital content, media platforms, and AI systems.

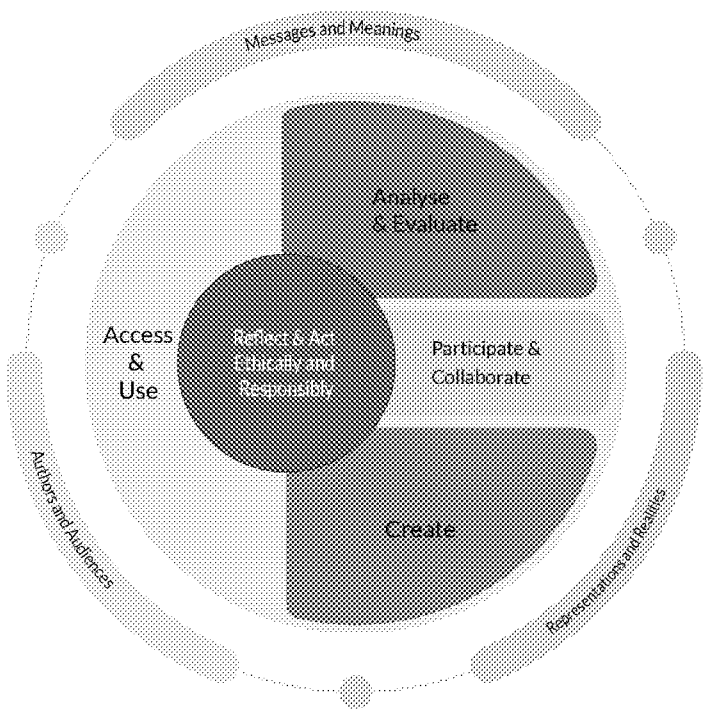
The definition and associated competences reflect the intersection between media and AI literacies, with a strong emphasis on effective engagement, ethical and critical evaluation, and responsible production within a digitally interconnected world. This framework aims to provide an adaptable and robust foundation – an anchor point – for cultivating the competences necessary to navigate, assess and engage with digital content, media platforms, and AI systems in an ethical and responsible manner.

Furthermore, the competences encompass not only cognitive capabilities but also embed the social, emotional and motivational aspects of MAIL, recognising that meaningful engagement involves willingness and self-regulation. These competences also acknowledge that AI systems increasingly function as environments that mediate interaction, influence perception, and shape how people learn, communicate, and relate – cognitively, socially, and emotionally – with and through machines.

As illustrated in **Figure 4.1**, being capable to access digital content and use media platforms and AI systems is a foundational condition for the development of other competences related to the analysis and evaluation of digital content, to the participation and collaboration through media platforms and with AI systems, and to the creation of digital content.

Moreover, the model shows that the competence to reflect and to act ethically and responsibly when engaging with digital content on media platforms and AI systems is transversal to all other competences in this model. In other words, this model argues that students must reflect and consider the ethical implications of all their actions on media and AI platforms. The next sections describe these competences in greater detail.

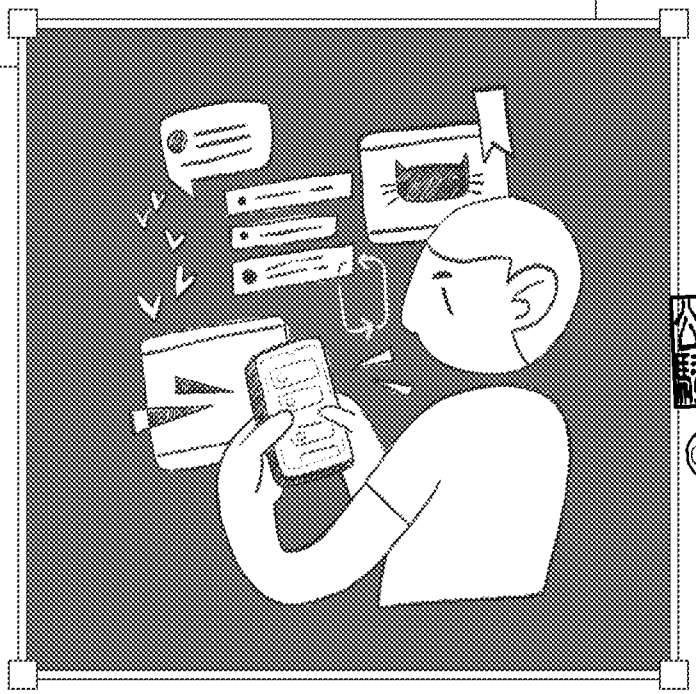
Figure 4.1. Media and AI Literacy Competence Model



4.1. Reflect and Act Ethically and Responsibly

Definition of Reflect and Act Ethically and Responsibly

Reflect and Act Ethically and Responsibly is defined as the ability to consider accountability, fairness, and respect for human values when engaging with digital content, media platforms, and AI systems.



Digital media platforms and AI systems are deliberately designed to capture and hold attention. They accomplish this through features like notifications, in-game rewards, algorithmically promoted content, and "like" counts – all of which encourage people to keep checking, scrolling, posting, and comparing themselves to others (Zuboff, 2019[53]). These same design choices tend to amplify content that sparks strong emotional reactions, including outrage and fear, as this content keeps people engaged (Terenzi, 2024[66]).

Ethical and responsible reflection involves students developing self-awareness about how digital interactions affect their attention, emotions, cognitive development and overall well-being (Holmes et al., 2025[30]). Students are expected to employ strategies to maintain distance from manipulation online, and consider critically how much time they spend online and interacting with AI systems (Haider and Sundin, 2022[19]). Students should be able to demonstrate an understanding of how their choices, posts, and platform interactions shape their long term online identity and public reputation. Moreover, students are then expected to consider how AI systems may influence their access to information, social behaviours, and overall wellbeing. Competent students can reflect on how multiple factors – including the design choices made by developers, the data used for training, and the algorithms employed by AI-based recommendation systems-influence their own and other people's perceptions, communication, and actions, carefully considering the power dynamics embedded in these systems.

Ethical engagement is rarely simple; responsible action is seldom easy. Students will encounter many situations where different values and principles – such as privacy, openness, equity, and efficiency – come into tension. In these moments, ethical and responsible action is less about following rules, and more about making decisions that balance competing priorities, and decisions that consider the possible effects on others.

For example, it includes the everyday micro-decisions that shape digital life: whether to forward a questionable meme, how to respond to a peer online, whether to use generative AI for a school assignment, what permissions to grant an app, or whether to speak up when something feels off. Ultimately, acting ethically and responsibly is about cultivating an ethical orientation toward media platforms and AI systems and being accountable for one's actions in digital contexts, and upholding core human values-including fairness, respect, inclusivity, transparency and sustainability in digital contexts (Hobbs, 2010[67]).

By embedding ethical considerations, responsible actions and personal accountability throughout the model, this overarching competence calls on students to continuously and critically examine how their choices in digital spaces impact others, themselves, and broader societal structures, systems, and cultural norms (Lewandowsky et al., 2023[68]).

Table 4.1. Draft Reflect and Act Ethically and Responsibly Student Expectation Progression

MMIL Competence	Competence Level	
Reflect and Act Ethically and Responsibly	High	The student demonstrates advanced understanding of practices to safeguard privacy and sustainability, knows how to engage ethically with media platforms and AI systems reflecting on the consequences of their actions online on their wellbeing, on their peers and wider society, and can reflect on AI systems' limitations and impact on society.
	Intermediate	The student demonstrates awareness of security, ethical, sustainability and reputational aspects in media platforms and AI environments. They can consider simple trade-offs (e.g. saving time vs cheating) when taking decisions on whether and how to use online and AI tools.
	Low	The student demonstrates basic understanding of online risks and is developing some awareness of the broader consequences of their digital actions, including privacy, sustainability, ethical issues, and long-term impact on reputation, cognitive development and wellbeing.

Note: Student expectation progressions are preliminary and will be revised after the PISA pilot study and the field trial.

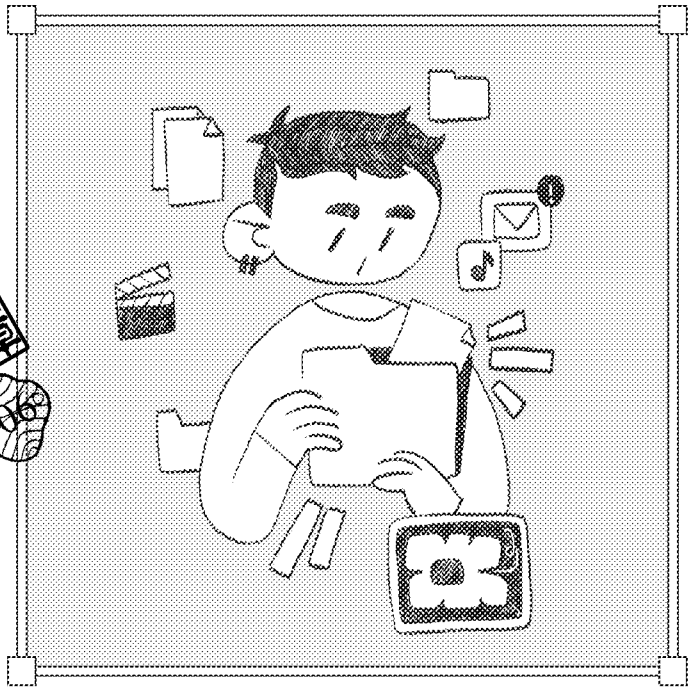
4.2. Access and Use

Definition of Access and Use

Access and Use is defined as the ability to effectively use, locate, query, prompt, and curate digital content on media platforms and AI-mediated environments.

Digital content, media platforms, and AI systems are woven into the fabric of our everyday lives, influencing how we seek, process and engage with information. Given the overwhelming abundance of digital content and tools, students must be able to efficiently access, sort through, and comprehend how to secure quality information relevant to their purposes. Without deliberate strategies for managing information overload and evaluating sources, students risk engaging with content superficially and relying on digital platform defaults without understanding their limitations (Bawden and Robinson, 2008[69]).

This competence involves currency with available search engines, AI tools, and other information sources. Competent students can recognise that search results are influenced by user history, location, popularity metrics and commercial interests rather than purely informational accuracy or quality (Tiernan et al., 2023[70]). They also acknowledge how AI recommendation systems shape, prioritise and personalise the visibility and ranking of content.



Therefore, access and use involve the foundational skills to engage with digital content, media platforms and AI systems. This includes care in curating, filtering, organising and storing information together with selecting tools to protect personal data from unintended AI training or surveillance, as well as ability to apply troubleshooting strategies and the capacity to select, adapt, or shift tools as needed when problems arise. Students should also be able to access and query generative AI tools.

Table 4.2. Draft Reflect and Act Ethically and Responsibly Student Expectation Progression

MAIL Competence	Competence Level
Access and Use	**High** The student strategically navigates digital environments by critically selecting search methods, protecting personal data and efficiently addressing technical challenges.
	Intermediate The student can filter information, organise content, and identify common issues, but gaps remain regarding familiarity with more complex tools, data management, understanding of recommendation systems and complex troubleshooting.
	Low The student demonstrates basic knowledge of common digital and AI tools and basic abilities to conduct searches, organise files and solve technical problems.

Note: *Student expectation progressions are preliminary and will be revised after the PISA pilot study and the field trial.*

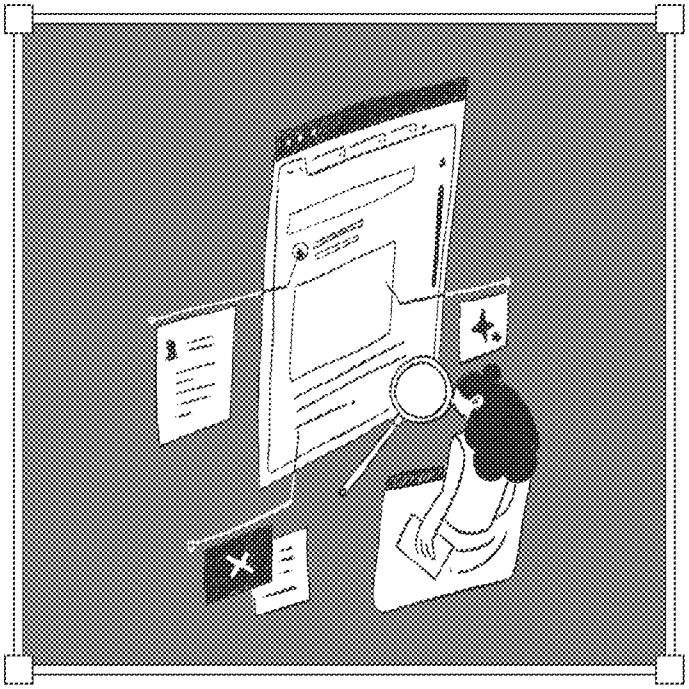
4.3. Analyse and Evaluate

Definition of Analyse and Evaluate

Analyse and Evaluate is defined as the ability to critically assess the purpose, bias, relevance, and credibility of human- and AI-generated media content.

Analysing and evaluating across media platforms is increasingly complex as the boundaries between human and machine authorship blur. Students should therefore assess the reliability and intent of sources behind text, video, audio, and mixed media, questioning not only the accuracy of information but the motivations and processes behind its creation. The proliferation of AI-mediated content further complicates how students evaluate media messages (Hancock, Naaman and Levy, 2020[71]). AI-generated texts, images, and videos can appear authoritative while being inaccurate, biased, or driven by undisclosed intent (Hancock et al., 2023).

Large language models (LLMs) and other AI systems do not "understand" the information they process. Instead, they generate responses by predicting what is most likely based on their models. Because their models are developed via masses of unfiltered training data, generative AI tools are likely to continue to recapitulate bias patterns despite advancements in AI bias detection (Sahoo et al., 2024[72]). Students should then be cognisant that some of these generative AI may "hallucinate", that is, produce content that seems credible yet is factually inaccurate (Maleki, Padmanabhan and Dutta, 2024[73]), and some even argue these hallucinations are a mathematical property rather than a feature of faulty training (Kalai et al., 2025[74]). Thus, students must approach media messages with skepticism, question their accuracy, and verify their claims against reliable sources.



However, misinformation spreads not only through deceptive intent but also through cognitive shortcuts (e.g. confirmation bias, authority heuristic) that make false or misleading content seem credible (Pennycook and Rand, 2021[75]; Metzger and Flanagin, 2013[76]). For this reason, literacy-based interventions hold promise for reducing individual-level vulnerability to misinformation. Research on psychological "inoculation" (Maertens et al., 2021[77]; Roozenbeek and van der Linden, 2024[78]) suggests that pre emptive exposure to common manipulation tactics – such as emotionally charged language, omission of key facts, or deepfake imagery – helps individuals build resistance to the use of such tactics in the media content people see. Misinformation is not the only challenge; even accurate information can be misleading if it is interpreted incorrectly or assumed to be more conclusive than it really is: oversimplifying complex issues, mistaking correlation for causation, or seeing patterns in random noise.

Analyse and evaluate require students to recognise how persuasion works, push back against overly simplistic narratives, and approach digital content with a healthy dose of skepticism rather than passive acceptance. Competent learners consistently deploy a robust set of analytic tools including identifying authorship, triangulating sources, reading laterally, assessing bias and expertise, and questioning how some AI systems filter prioritise and generate information. They are expected to consider who benefits from a message, what information and perspectives might be missing, and how persuasive techniques are used to mislead or manipulate audiences. Competent students are also aware of the economic and social incentives that drive digital media production – whether a message is designed to inform, persuade, provoke outrage, or generate profit – and adjust their evaluation strategies accordingly.

These students demonstrate their competence by tracing claims of an AI system back to original sources, assessing whether AI has introduced distortions, and identifying when engagement-driven systems have shaped what information is most visible. Lateral reading remains a crucial practice, but it is combined with additional strategies to deal with hallucinated outputs and recognize the effects of algorithmic personalization (Wineburg and McGrew, 2019[79]).

Table 4.3. Draft Analyse and Evaluate Student Expectation Progression

MAIL Competence	Competence Level	
Analyse and Evaluate	High	The student competently seeks and evaluates diverse, credible sources and perspectives, critically analyses the mechanisms and biases of media/AI tools and actively considers the impact of confirmation bias to form a well-founded, multifaceted understanding.
	Intermediate	The student demonstrates awareness of credibility, bias, and external influences in information analysis and evaluation, shows familiarity when conducting lateral reading and identifies when accurate information is presented in misleading ways.
	Low	The student employs basic strategies to assess the reliability and intent across different media, like authorship and credibility of the source, and shows awareness of the importance of questioning the accuracy and motivation behind digital media and AI-generated messages.

Note: Student expectation progressions are preliminary and will be revised after the PISA pilot study and the field trial.

4.4. Participate and Collaborate

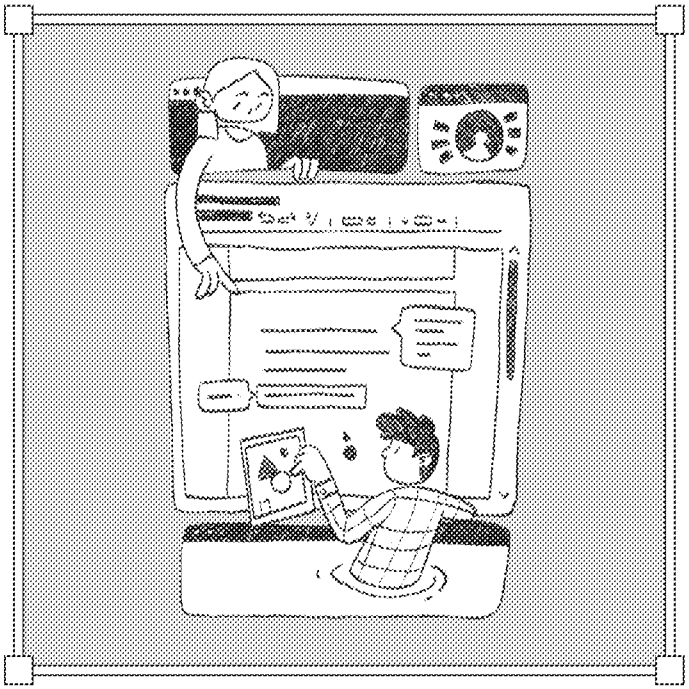
Definition of Participate and Collaborate

Participate and Collaborate is defined as the ability to participate actively and work with others in digital contexts with an awareness of AI's role in amplifying, mediating or distorting interactions; and to collaborate or share content as appropriate.

Participation and collaboration in digital spaces signals more than access and technical skills; it requires students to develop communicative agility, social awareness (Örtegren, 2023[80]) and ethical responsibility. Online interactions are shaped by algorithms and platform rules as well as evolving social norms (Jandrić and Knox, 2021[81]; Jandrić et al., 2018[82]). Increasingly, these occur in hybrid networks of humans and AI systems. Cyberbullying, phishing and other forms of digital exploitation can undermine trust and participation in online spaces, implying that students must take responsibility for what they share with others and how they respond to others' messages (Manca, Bocconi and Gleason, 2021[83]).

Digital participation and collaboration also play an essential role in civic life. Civic participation online demands careful evaluation of information sources and an awareness of platform affordances and dynamics – the design choices, policies, algorithms, and cultural norms that shape how content circulates and how people interact (Gordon and Mihailidis, 2022[84]).

Participation describes the meaningful, critical, and socially responsible interaction in online spaces as both consumers and creators of information, entertainment, persuasion, and other types of media messages. Competent students choose to participate in online spaces that are safe, understand both the power and limits of online action and ensure their online interactions are respectful and inclusive. They can engage in discourse care, adapting their communication to context, intervening to de-escalate a conflict or protect victims, and controlling impulsive reactions.



Moreover, collaborating in digital spaces extends beyond communication to sharing and co-creating knowledge with others (Allen and Kendeou, 2023[85]). Online collaboration includes working together on shared documents, contributing to open-source projects, or exchanging ideas on social media platforms. Students should be able to use social media platforms effectively, attend respectfully to different viewpoints, and support collective knowledge production. To navigate collaborations responsibly, students are expected to understand how AI systems work – differently from humans – and how they influence engagement (e.g. through recommendation systems, content moderation) and recognise that these systems may also determine whose voices are amplified and whose are overlooked.

Table 4.4. Draft Participate and Collaborate Student Expectation Progression

MAIL Competence	Competence Level
Participate and Collaborate	**High** The student adeptly navigates, adapts communication, moderates exchanges, protects other people's right, exchanges information, collaborates and co-designs projects using media/AI tools, attempting to promote transparency, inclusivity, and social justice through these online actions.
	Intermediate The student selects and utilises appropriate and safe media and AI tools for communication, collaboration, and advocacy. The student makes attempts to adapt communication, prevent and solve conflicts and harassment online, share tasks and design projects with others.
	Low The student makes initial attempts to adapt communication and collaboration in digital environments and is developing their understanding on how to utilise media platforms and/or AI systems for participation and collaboration.

Note: Student expectation progressions are preliminary and will be revised after the PISA pilot study and the field trial.

4.5. Create

Definition of Create

Create is defined as the ability to identify a communication need, the appropriate content, and the format that will help achieve that goal using media and AI systems.

Remix culture, collaborative content creation, and open-source projects provide new venues for students to develop their creativity and contribute to shared knowledge building and collective storytelling. AI tools are now being used to brainstorm, to automate repetitive tasks, but also to open new forms of artistic and literary expression. However, these tools also raise complex questions about originality, creatorship, ethical responsibility, and disclosure (Formosa et al., 2024[86]). As they navigate this complex creative space, students must be cognisant of relevant intellectual property and copyright laws, and ethical implications of adapting or repurposing existing works. Students should then critically assess their role as human-machine "co-creators," balancing human agency with machine-assisted production (Järvelä et al., 2025[87]). Responsible student-creators must also consider the possible social impacts of their work, ensuring that their contributions are constructive, inclusive and ethically sound.

As a result, creating media requires intentionality, technical fluency, creative thinking and ethical awareness. Competent students approach creation – with or without the support of generative AI – as an iterative process. Whether writing, producing multimedia, coding interactive experiences, or working with AI-generated content, students are expected to consider why they are creating, who they are creating for, what choices they are making when they create, and how best to communicate their ideas. Effective creators use multiple modalities – storytelling, visual design, and platform-specific strategies – to engage audiences in meaningful ways and express their original ideas.

Table 4.5. Draft Create Student Expectation Progression

MAIL Competence	Competence Level	
Create	High	The student demonstrates mastery in crafting and modifying media, skillfully leveraging digital/AI tools with clarity, persistence and creative thinking. The student applies a strong ethical focus when deciding which tools to use and how to use them and tailor outputs to purpose and audience.
	Intermediate	The student uses multiple media and AI tools to create messages, with basic audience awareness and is willing to make iterations to achieve originality or refinement.
	Low	The student uses basic media platforms and/or AI systems to make simple edits to other people's projects, and shows basic understanding of coherence, originality and intent.

Note: *Student expectation progressions are preliminary and will be revised after the PISA pilot study and the field trial.*

In sum, the evolving digital ecosystem demands an integrated approach to literacy, where technical expertise, ethical discernment, critical analysis, collaborative engagement, and creative expression converge to support meaningful participation. The five competences of the MAIL Framework – reflect and act ethically and responsibly, access and use, analyse and evaluate, participate and collaborate, and create – serve as foundational pillars to assess whether individuals are not only able to navigate but also to shape digital environments with confidence and care. As new challenges and opportunities continue to emerge at the intersection of media and AI, these interconnected competences are essential for fostering both personal agency and a collective digital culture that is informed, adaptive, and just.

05.

The Assessment of Media and AI Literacy in PISA

In light of the accelerating integration of media and AI into our everyday lives, it is imperative to cultivate capacities that include a focus on the complex and multifaceted relationship between authors and audiences, messages and meanings, and representations and realities. This helps ensure that learners develop competencies that extend beyond mere technical proficiency and specific tools (Fazio et al., 2024[42]; Van Laar et al., 2025[88]). This assessment is designed to evaluate not only what individuals know and can do within digital environments, but also how they engage with these tools (Krutka et al., 2019[89]).

To achieve these goals, the assessment includes a series of real-world tasks that are relevant to school, work, leisure, civic life, and social relationships, involving the use of different media platforms and AI systems. In doing so, the assessment aims to provide a holistic portrait of students' Media and AI Literacy, situating individual skillsets within broader social, cultural and technological landscapes. Participants will be invited to analyse scenarios (e.g. climate literacy, digital citizenship and online safety), critically evaluate information, collaborate in digital workspaces and create original content that reflects both ethical awareness and creative intent. Tasks will be crafted to surface not only digital proficiency and cognitive skills but also ethical considerations and the motivation to explore affordances and iterate.

The MAIL expert group recommends that half of the assessment time is allocated to "analyse and evaluate" and "create" (e.g. 25% of the time for each for a total of 50% of the assessment time), and the rest be distributed across the three other competences.

5.1. Task Descriptors

The following sections overview the different characteristics of the assessment tasks. Task developers should consider all these descriptors for the implementation of the assessment.

5.1.1. Context and Purpose >

Media and AI literacy competences are relevant to many aspects of daily life. The context and purpose dimension underscores the complexity and multifaceted nature of digital interaction that addresses both individual and social factors of technology use. For this assessment, five primary purposes shape the framework: relationships, learning, entertainment, persuasion and citizenship. These purposes serve as guiding pillars for evaluating the MAIL competences in realistic media and AI-driven environments.

- **Relationship:** The relational dimension integrates social learning theory with recent research on computer-mediated communication on media platforms and AI-mediated interaction (Hancock, Naaman and Levy, 2020[71]). Although AI-mediated connections are a growing area of study, it is important to note that most relational interactions on media platforms still occur between humans without the involvement of AI. Human-to-human communication continues to form the core of social exchanges across most digital platforms, even as AI becomes more prevalent. Nonetheless, current studies emphasise how media platforms and AI systems both facilitate and complicate human relationships, requiring new forms of literacy that account for human-AI interaction patterns and their impact on interpersonal dynamics and well-being (Yuan, Cheng and Duan, 2024[90]; Nygren et al., 2025[91]).

- **Learning:** This dimension refers to learning situations either at school or at work. Learning-related assessment tasks are grounded in constructivist and situated-learning theories, which view knowledge as constructed through active engagement in authentic, context-rich environments (Vygotsky, 1978[92]; Winne, 2020[93]). These tasks require students to navigate complex digital information ecosystems where content of varying reliability and purposes – informative, persuasive, and entertaining – is interwoven and may be misleading (Leu et al., 2013[94]). Assessment tasks therefore focus on how students evaluate information, integrate multiple sources, and regulate their learning using metacognitive and self-regulated strategies (Winne, 1996[95]; Zimmerman, 1986[96]). Reflecting real-world demands in school and work, tasks involve the use of media platforms and AI systems to acquire accurate information, assess claims, and recognise the capabilities and limitations of AI in authentic learning situations (National Research Council, 2000[97]).

- **Entertainment:** Entertainment-related assessment tasks draw on media psychology and digital media research to examine how AI reshapes recreational engagement, transforming passive consumption into interactive and personalised experiences (Sundar, 2007[98]; Valkenburg, Peter and Walther, 2016[99]). These tasks situate students in leisure-time scenarios involving social media, games, and AI-curated content, where algorithmic recommendation systems, interface and user design can strongly influence attention and engagement (Anantrasirichai and Bull, 2021[100]). Assessment tasks therefore focus on how students recognise and reflect on the role of algorithms, automation, and design features in shaping entertainment experiences, including their potential effects on attention, preferences, and behaviour (Baudrillard, 1998 [1970][101]). Drawing on informal learning contexts, tasks may involve everyday interactions with AI-powered applications – such as recommendation systems, generative tools, smartphone games or chatbots – to assess students' awareness of algorithmic bias, data use, ethical considerations, and the broader implications of AI and modern digital tools on how people spend their leisure time (Sundar, 2020[102]; Ng, 2021[103]).

- **Persuasion:** Persuasion-related assessment tasks draw on classical and contemporary theories of social influence to examine how media platforms and AI systems seek to shape attitudes, beliefs, and behaviour (Petty and Cacioppo, 1986[104]; Cacioppo, Cacioppo and Petty, 2017[105]). These tasks require students to analyse and apply rhetorical techniques - such as of logos (logical reasoning), pathos (emotional activation), ethos (charisma and credibility), and kairos (delivering a message at the right situation or moment in time) - across traditional and digital media, while recognising how algorithmic recommendation systems and AI-driven technologies can amplify persuasive effects at scale using behavioural data and predictive modelling (Akter et al., 2021[106]; Simchon, Edwards and Lewandowsky, 2024[107]). Embedded within this context, assessment tasks addressing misinformation protection focus on students' ability to evaluate claims, revise knowledge, and develop cognitive defences against (AI-enhanced) misinformation with a persuasion purpose (Lewandowsky et al., 2012[108]; Roozenbeek et al., 2022[109]; Kendeou, 2024[110]; Simon, Altay and Mercier, 2023[111])

- **Citizenship:** Citizenship-related assessment tasks are grounded in theories of digital citizenship, civic participation, and democratic education, which emphasise agency, critical consciousness, and informed engagement in public life (Mihailidis, 2018[112]). These tasks assess students' ability to seek and analyse information, evaluate news and civic claims, and reflect on how media platforms and AI systems shape civic and political participation in algorithmically mediated public spheres (Martens and Hobbs, 2015[59]; Hobbs, 2020[113]). Reflecting the broader aims of education for democratic citizenship, assessment tasks address the knowledge, skills, and attitudes needed for active participation in democratic life, positioning media and AI literacy as essential components of civic education (Borhan, 2025[114]).

  Embedded within this context, empowerment-oriented tasks focus on students' capacity to use AI systems creatively, ethically, and responsibly, including recognising bias, challenging misinformation, and exercising autonomy in digital civic engagement (Deci and Ryan, 2000[115]; Allen and Kendeou, 2023[85]; Zhang and Dafoe, 2019[116]).

By foregrounding learning, entertainment, relationships, persuasion and citizenship, this assessment framework recognises the multifaceted purposes media platforms and AI systems serve in contemporary life. These interconnected purposes establish a comprehensive foundation for evaluating competences and fostering meaningful engagement in complex, technology-mediated environments.

5.1.2 Media >

As digital technologies proliferate, the landscape of digital content grows increasingly diverse, encompassing a wide spectrum of modalities, formats and genres. Thus, the MAIL assessment must integrate this diversity, ensuring learners engage with the full range of media that permeate the current digital environments.

- **Digital text:** Digital text remains foundational, spanning web articles, social media posts, blogs, instant messages and e-books. This framework considers the evolving conventions and interactive features of digital writing, as well as learners' ability to discern credibility, recognise bias and synthesise information across dispersed interactive digital text sources.
- **Audio:** From podcasts to voice assistants, audio content is a central component of modern media engagement. This assessment framework incorporates tasks that require critical listening, interpretation of tone and subtext, and evaluation of sound-based persuasion techniques. Increasingly, learners encounter AI-generated audio content, making discernment skills ever more essential.
- **Visual media**: Visuals – still images, infographics, memes and charts – are ubiquitous in digital spaces. Learners must be equipped to interpret, analyse and create meaningful visual content, recognising both the persuasive power of images and the risks of manipulation through editing or AI-generated visuals (e.g. deepfakes).
- **Video:** Video media, including streaming content, short-form social videos, news segments and educational tutorials, demand multilayered literacy. This assessment spans comprehension of narrative structure, evaluation of production choices and awareness of algorithmic curation and recommendations.
- **AI-generated and algorithmically curated content:** Learners routinely encounter media shaped or created by artificial intelligence: personalised news feeds, generative text and images, recommendation systems and synthetic media. This framework recognises the need for critical awareness of how algorithms influence exposure, shape perceptions and mediate experiences, calling for advanced competences in monitoring, questioning and managing AI-driven content.

Explicitly incorporating these varied media types into the MAIL assessment ensures learners demonstrate literacy skills that are suitable for the dynamic and multifaceted realities of media platforms and AI-rich environments of today.

5.1.3 Tools ?

Similarly, the MAIL assessment requires a thoughtful selection of tools that authentically reflect the wide range of digital and algorithmic environments learners navigate in daily life. To capture the complexity and diversity of media platforms and AI systems, each category below includes illustrative examples that mirror the real-world interfaces, functionalities and challenges learners routinely encounter. The goal is that, throughout the assessment tasks, student competences are assessed using a variety of functional tools that are accessible to students in a realistic way.

↳ Media Platforms

Media platforms are the backbone of contemporary media engagement, offering portals through which information, interaction and creative expression unfold. The assessment may employ widely used social media networks (e.g. Instagram, X, TikTok), collaborative knowledge platforms (e.g. Wikipedia), online news aggregators and instant messaging services (e.g. WhatsApp, Discord). To broaden the scope, the framework also integrates search engines (e.g. Google, Bing), email applications (e.g. Gmail, Outlook), photo and video editing tools (e.g. Canva, Adobe Photoshop, CapCut), file explorer and cloud storage platforms (e.g. Google Drive, OneDrive, Dropbox) and discussion forums (e.g. Reddit, Quora).

These platforms provide authentic contexts for evaluating core competences such as information retrieval, content discernment, source evaluation, privacy management, media creation, digital collaboration and organisational skills. For example, in potential assessment tasks, simulated social media feeds could be constructed, enabling learners to demonstrate headline verification among posts interwoven with AI-generated content and user comments. Search tasks might require critically assessing the credibility of top search results or identifying sponsored content. Email scenarios could assess the ability to recognise phishing attempts or craft clear, appropriate messages. Similarly, learners could be asked to evaluate an image for bias, organise files to support collaborative work, or moderate a discussion forum for effective citizenship.

↳ AI systems

AI systems are increasingly interwoven into the fabric of media engagement, shaping not only the information encountered but also the user experience itself. Assessment tasks may incorporate generative language models (e.g. ChatGPT, Gemini), image generators (e.g. DALL·E, Midjourney), recommender algorithms (as seen on YouTube, Netflix, or Spotify), and voice assistants (e.g. Alexa, Google Assistant). These AI systems could serve a dual assessment purpose. For instance, learners might critically analyse outputs from an AI text generator, distinguishing between factually accurate and erroneous or manipulative responses. Alternatively, tasks may involve interacting with AI-curated news feeds, algorithmically recommended video playlists, or smart search suggestions, requiring learners to question the underlying assumptions, biases, and potential echo-chamber effects inherent in algorithmic curation and filtering. Furthermore, synthetic media – such as deepfakes or AI-generated audio – will be integrated into scenario-based assessments to evaluate detection and response strategies.

Taken together, integrating a broad spectrum of media platforms and AI systems into the assessment will increase the chances that learners engage with the full range of tools shaping contemporary media and information landscapes nowadays. The inclusion of authentic, contextually relevant examples will also enhance the validity of the assessment, allowing learners to demonstrate their real-life competences within the test environment.

5.1.4 Tasks

The tasks dimension describes the format of the activities through which learners engage with the MAIL assessment. These tasks vary in complexity – from basic verification and recognition exercises to more advanced creation and evaluation processes – and length.

The goal is to evaluate students' abilities on each of these MAIL competences across different purposes, using the short time available for assessment as efficiently as possible. In practice, PISA MAIL will use a combination of shorter multiple-choice and open response items, and longer tasks where students work in a more immersive scenario, have access to different tools and complete several items.

↳ Short Tasks

Short assessment tasks, often utilising familiar formats such as multiple choice, matching, or brief constructed response, will target in an efficient manner the competences in the model. These concise tasks will ask them to quickly demonstrate their knowledge and skills in a focused manner. Furthermore, although most of these tasks will follow a more traditional structure, they will still capture meaningful insights about the different competences, offering valid and reliable evidence about their literacy levels. **Table 5.1** provides examples of what short – and long – assessment tasks could look like in PISA.

↳ Long Tasks

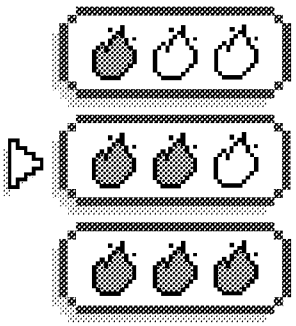
Short traditional items that ask students to select one or several options in an abstract situation could prompt reflections and responses that do not necessarily correspond to what students would do in those circumstances. Therefore, additional evidence should also be collected by observing what students do when they are in a scenario where they have more freedom to decide what action to take and which tool to use.

Simulating these digital environments – and defining the rules to evaluate sequences of behaviours – may lead to higher engagement and better measurement of complex, decision-making skills. These longer tasks allow for the observation of strategic thinking and persistence as learners navigate open-ended problems and produce more open-ended responses.

Table 5.1. Examples of Assessment Tasks by MAIL Competence

MAIL Competence	Task Example(s)
Reflect and Act Ethically and Responsibly	› "To Share/Accept or Not?" presents learners with several short pieces of digital content (e.g. different types of photos, different types of messages), and they are asked to choose whether they would share it or not to social media and/or a group chat. Similarly, learners are presented with requests (e.g. accept cookies, link accounts), and they need to choose whether they would accept those or not. › "To Use AI or Not?" presents learners with different scenarios (e.g. concept practice, communication practice), and asks students to indicate in which scenarios they would use an AI system like a chat bot. › Avoiding Online Traps presents learners with different types of digital content (e.g. algorithm-curated news feeds), and they are asked whether they believe there are valid reasons to question the information presented, whether they believe it is important to seek out diverse perspectives, or whether they think it is safe to accept the information provided.
Access and Use	› Productivity Tools asks students to demonstrate how to perform different quick actions using media platforms and AI systems (e.g. use the calendar tool to schedule an appointment, use the email tool for sending a message, use system tools for organising their assignments in different subject folders). › Digital Declutter asks students to organise and streamline a disorganised collection of digital files by sorting them into clearly labelled folders, removing unnecessary items, and/or efficiently using an online file storage app or service to manage their documents and resources. › Accounts/Privacy Settings tasks students with configuring and updating their digital accounts and privacy options considering how different settings could affect personal information and online presence.
Analyse and Evaluate	› Flag the Ad/AI presents learners with different images, and they are asked to determine whether they are advertisements or not, or whether they are AI-generated or not explaining their reasoning in a short-constructed response. Further, students need to provide a justification for their choice. › Lateral Reading asks students to look across sources to evaluate consensus and the source quality and bias of promising sources (e.g. searching for information about author expertise and funding sources or using reverse image search tools to verify the authenticity of a photograph circulating online). › Reality and Modelling asks students to identify the gap between the representing model and the reality it aims to represent. For instance, analysing how AI-generated media can distort perceptions of real events, how different media headlines compare to the actual content of news stories, or explaining which representation is a useful simplification and which might be misleadingly oversimplified.

MAIL Competence	Task Example(s)
Participate and Collaborate	› **Give Feedback** presents learners with quick scenarios in which they are asked to provide constructive feedback to peers. › **Media & AI Advisor** asks students to provide advice to different types of social relations (e.g. peers, teachers, family) on which uses of media platforms and AI systems are more or less risky for their well-being. › **Group Chat Collaboration** tasks students with actively engaging in group discussions contributing ideas, responding thoughtfully, and/or navigating challenging conversational dynamics to complete collaborative tasks.
Create	› **Personal/Professional Profile** tasks students with selecting digital content and/or updating digital profiles considering whether they are meant to be curated for personal or professional purposes. › **Media Editor** tasks students with editing and/or enhancing digital content (e.g. adding annotations or stickers) using different media platforms for different purposes and/or audiences. › **Meme Creation** asks students to use image or video editing tools to produce new messages by adding text, adjusting colours, or incorporating stickers, demonstrating creativity in digital communication.



5.1.5. Difficulty Drivers >

The effectiveness of the assessment in measuring the different levels of competences will depend on a clear of understanding of how different task elements contribute to the complexity of the item. Therefore, below are key drivers of difficulty that could affect performance in the assessment:

- **Complexity of the context and the purpose:** Embedding tasks in novel or multifaceted real-life scenarios increases the cognitive load for some students and makes it harder for them to identify the appropriate way to solve the task.
- **Diversity of media types:** Engaging with unfamiliar, complex, or multiple media formats could be challenging for some students as it requires more flexibility and broader understanding of what a particular task requires.

- **Variety of tools and platforms**: Navigating different or novel interfaces and functionalities across a range of media platforms and AI systems increases the operational complexity of the task making it harder for some students to complete the task.
- **Demand for higher-order thinking processes**: Higher-order tasks – for example longer critical analysis tasks, require deeper understanding and more advanced skills from students than basic recognition tasks – for instance shorter tool selection tasks, which raises the difficulty of the assessment.
- **Open-ended responses**: Tasks that require students to write, create a video or other digital artefacts require more effort, and are thus expected to be more difficult than tasks with a multiple-choice format.
- **Authenticity and realism of the scenarios**: The more realistic and contextual rich the scenario, the more the need for adaptive problem-solving during the assessment, as tasks with real-life scenarios would mirror actual digital challenges that present unpredictable variables.
- **Ambiguity of task instructions**: Less structured tasks with open-ended goals make it harder for some students to determine how to complete the tasks, making it uncertain and more difficult.
- **Amount of support and guidance**: Minimal scaffolding, hints, or feedback throughout the assessment requires greater independence and problem-solving, making it harder for some students.

↳ Questionnaire

In an increasingly complex digital ecosystem (Fosco et al., 2022[6]), understanding not only what students know or do, but how they think and what attitudes they hold, is an essential component of a comprehensive MAIL assessment. Therefore, it is important to assess student attitudes towards these tools and systems, their perceptions of risks and opportunities related to their well-being, their exposure to media and AI instruction at school, along with their own practices and preferences related to media and AI use (Hilbert, 2020[2]). Their inclusion acknowledges that 21st-century readiness is not only confined to technical and/or cognitive skills but also includes the mindsets and dispositions that enable students to think critically, act responsibly, and adapt to change. **Table 5.2** provides examples of questionnaire constructs or scales that could be included in this PISA assessment.

These questionnaire scales complement the evidence from the cognitive test and provide a multidimensional framework for better understanding students' media and AI competences. The PISA student and school questionnaires will also include scales designed to measure the opportunities students have to practice media and AI literacy in the classroom.

Table 5.2. Examples of Questionnaire Constructs by MAIL Competence

MAIL Competence	Questionnaire Construct Example(s)
Reflect and Act Ethically and Responsibly	Actively Open-Minded Thinking is the disposition to consider alternative viewpoints, to seek out evidence that may contradict their own beliefs, and to be willing to revise opinions considering the new information acquired (Stanovich and Toplak, 2023[117]). Attitudes towards AI are students' perceptions, beliefs and emotional responses to AI and its role in society (Ng et al., 2023[118]).
Access and Use	Media Literacy Exposure is the degree to which students are exposed to educational opportunities and resources aimed at developing their ability to critically analyse, evaluate and create media (Hobbs and Frost, 2003[119]). AI Literacy Exposure is an emerging construct that reflects students' opportunities to learn about artificial intelligence-its principles, applications, and implications (Zhong and Liu, 2025[120]). Digital Privacy-Protection Strategies are the skills, knowledge, and behaviours that individuals employ to safeguard their personal information in digital spaces (Buchanan et al., 2006[121]).
Analyse and Evaluate	Misinformation Susceptibility assesses an individual's vulnerability to false information (Maertens et al., 2023[122]). Manipulation Susceptibility assesses an individual's vulnerability to believing misleading statements that are not explicitly false (Maertens et al., 2023[123]). Digital Dependence assesses the extent to which individuals rely on digital devices, platforms, and services in their daily lives (Stoilova, Livingstone and Kardefelt-Winther, 2016[124]).
Participate and Collaborate	Media Participation refers to the ways in which students actively engage with media, not just as passive consumers but as creators of digital content, participating in online discussions, and engaging in digital activism (Stoilova, Livingstone and Kardefelt-Winther, 2016[124]). Digital Risks and Harms focuses on the adverse effects and dangers associated with digital engagement that could range from exposure to inappropriate or harmful content, cyberbullying, misinformation and digital addiction to more subtle risks such as privacy breaches and data misuse (Buchanan et al., 2006[121]).
Create	Media Preferences are the types of media students choose to consume or interact with, including preferences for different platforms, genres, formats and sources (Stoilova, Livingstone and Kardefelt-Winther, 2016[124]). Media Practices refers to the routines, habits, and behaviours students exhibit when interacting with media, like the amount of time spent online, the kinds of activities undertaken, the balance between consumption and creation, and the adoption of safety and privacy practices (Stoilova, Livingstone and Kardefelt-Winther, 2016[124])

5.2. An Example Task

5.2.1. Overview of the Task >

The following exemplar scenario focuses on assessing the credibility of information sources – a common and authentic context for demonstrating Media and AI Literacy. In this role-play, students act as journalists who must access, analyse, and evaluate information from multiple sources, possibly also engaging with media creation or ethical decision-making. This example helps visualise the nature of the assessment tasks, which may vary in focus, length and complexity.

↳ Task Assignment

First, students receive a trending piece of news – or novel information – and are asked to analyse the media message. In this example, the student is told it is important to verify the information so that the newspaper company has enough evidence to decide whether to publish it. **Figure 5.1** shows what the notification badge could look like on the homepage of the chat tool in a simulated desktop environment.

Figure 5.1. Example of Chat Tool Notification Badges

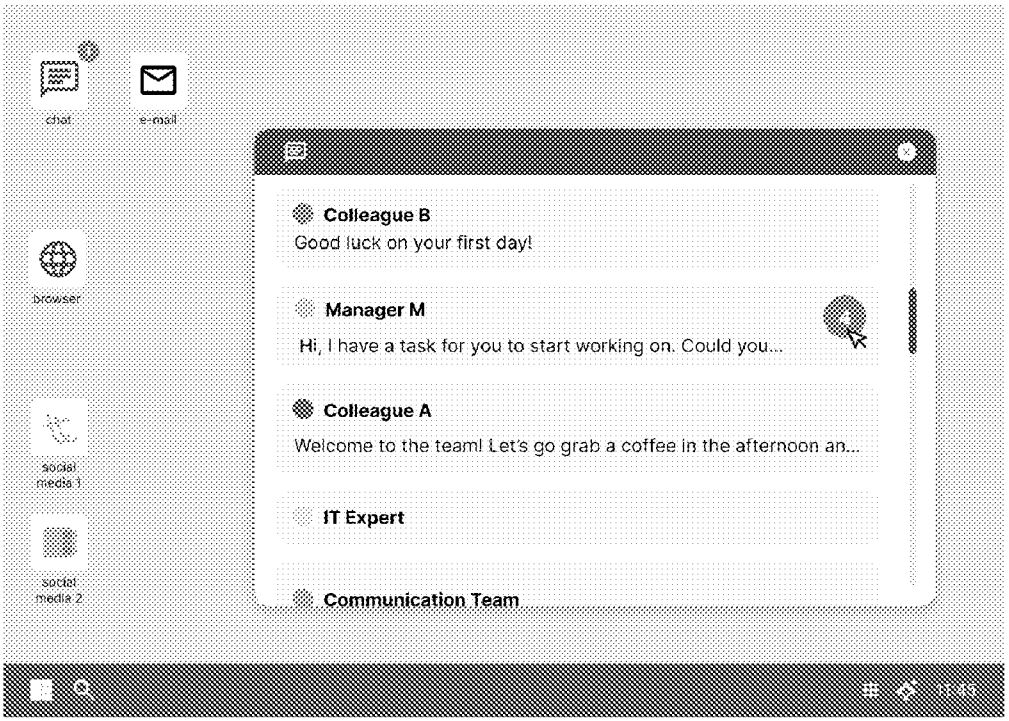
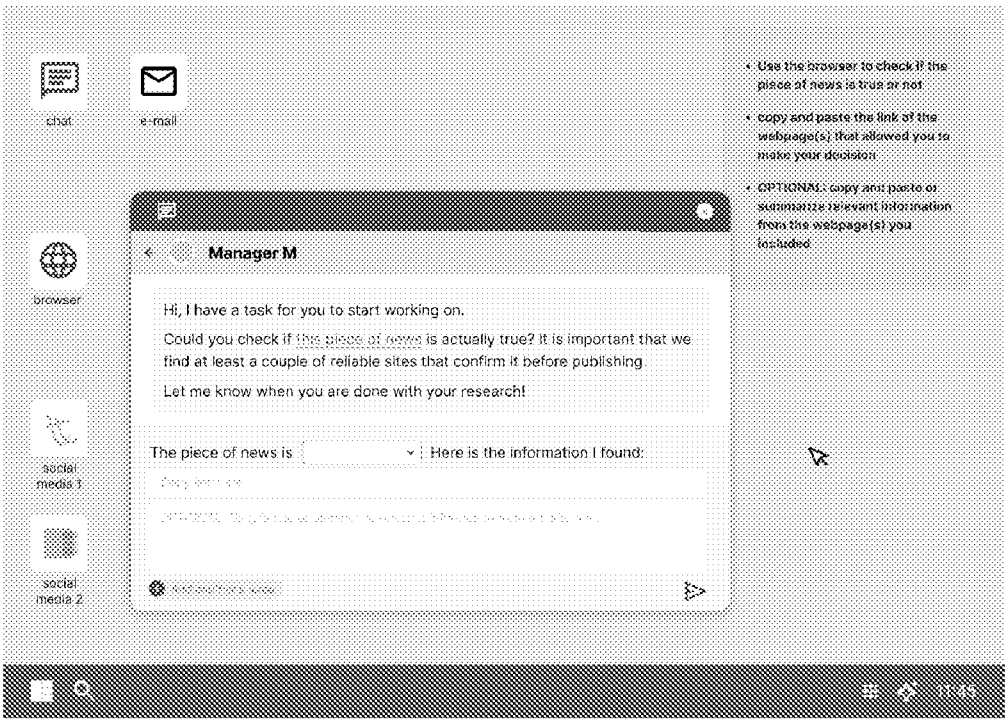


Figure 5.2 shows what the message could look like once the student opened the chat. Here, the manager shares the piece of news including some context and an embedded link. Next to the manager's message, the students find a list of the actions that they are expected to complete to solve the task successfully. These could be included to provide some additional guidance to students.

The bottom of the chat tool features a message builder, in which students complete the message by (a) selecting whether the news is accurate, partially accurate, or inaccurate; (b) providing the URL of one, or ideally more, online sources they consulted and that support their claim; (c) including relevant information found online that helped the student make the judgment. Students could use "+ Add Another Source" to add more than one of the sources they consulted.

Figure 5.2. Example of Message with Task Instructions from the Chat Tool



↳ Lateral Reading

Students are also expected to analyse the piece of news shared by the manager by consulting different online sources. This phase represents the core of the lateral reading task. Here, students must use the browser tool to search for information to confirm whether the piece of news is true. In the implementation of this task for PISA, it is likely that students will not be given access to the real Internet but instead to a simulation. To begin their research, the student should first have a look at the piece of news that was shared by the manager. **Figure 5.3** shows that, after clicking on the embedded link in the message, students view the news sent by their manager open in a new window in the Browser tool.

Then, students – ideally – start searching for additional information from other sources. This should help them decide, for instance, whether the information is (a) accurate, current and complete; (b) partially accurate, current and complete, or (c) inaccurate, outdated and incomplete. Moreover, students also ideally consider the authority, credibility, and purpose of (a) the source of the news, and (b) the sources they choose to consult during their own research. **Figure 5.4** shows an example of what it could look like when students type keywords in the Browser tool.

Figure 5.3. Example of Website in the Browser Tool with News to be Analysed

Figure 5.4. Example of New Tab in Browser Tool with Student Keywords

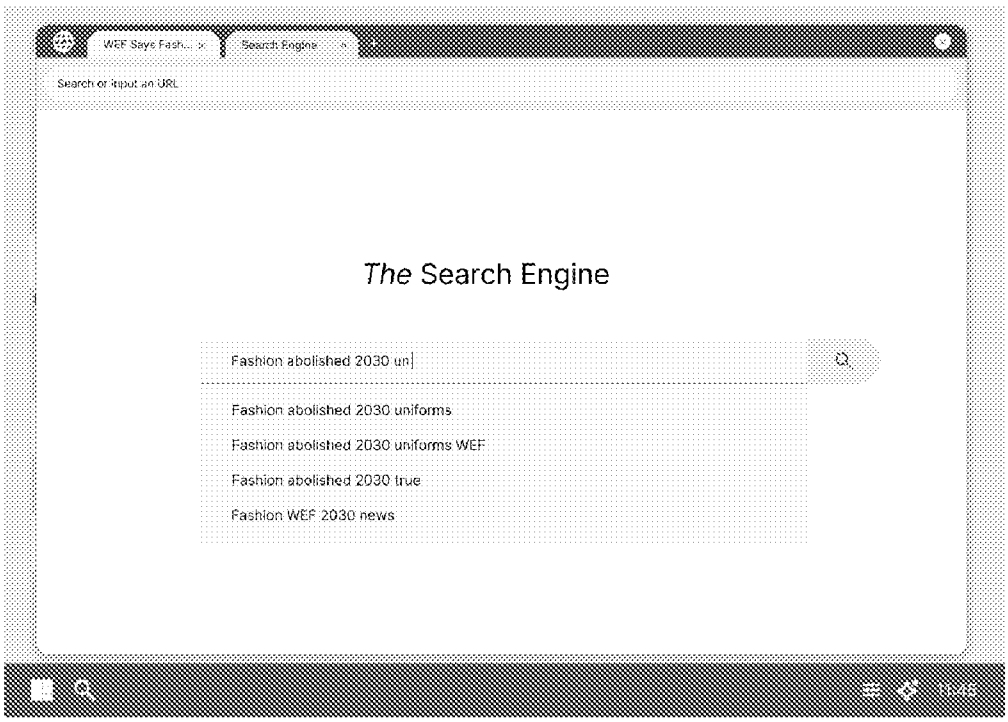


Figure 5.5 shows the list of websites students obtain from their search query – in the same way as they normally would when conducting a search on a real browser, each of these results are active links they could choose to consult to analyse the claim.

Keeping in mind the functionality and realistic feel of the tools, **Figure 5.6** shows that when clicking on one of the results, a new tab automatically opens and students read its content. Ideally, the simulated environment will include webpages with different content and layout; some with information about the author of the content, some with details about the source itself (e.g. online journal, well-established blog), considering some students might go further searching about the source's credibility.

Figure 5.5. Example of Search Results Page in Browser Tool

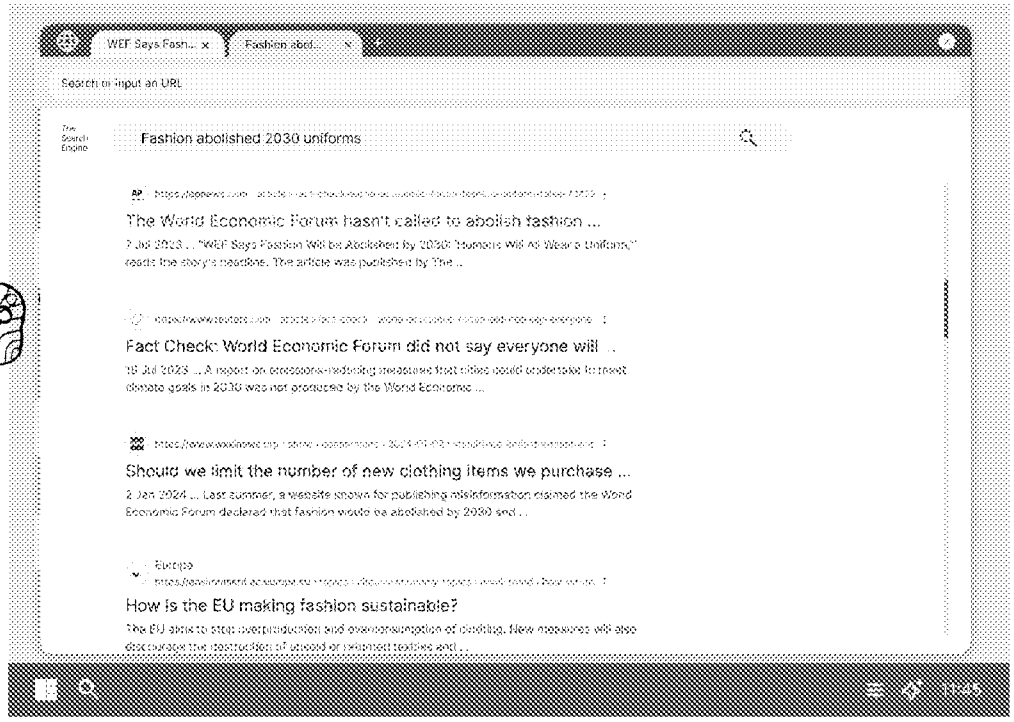
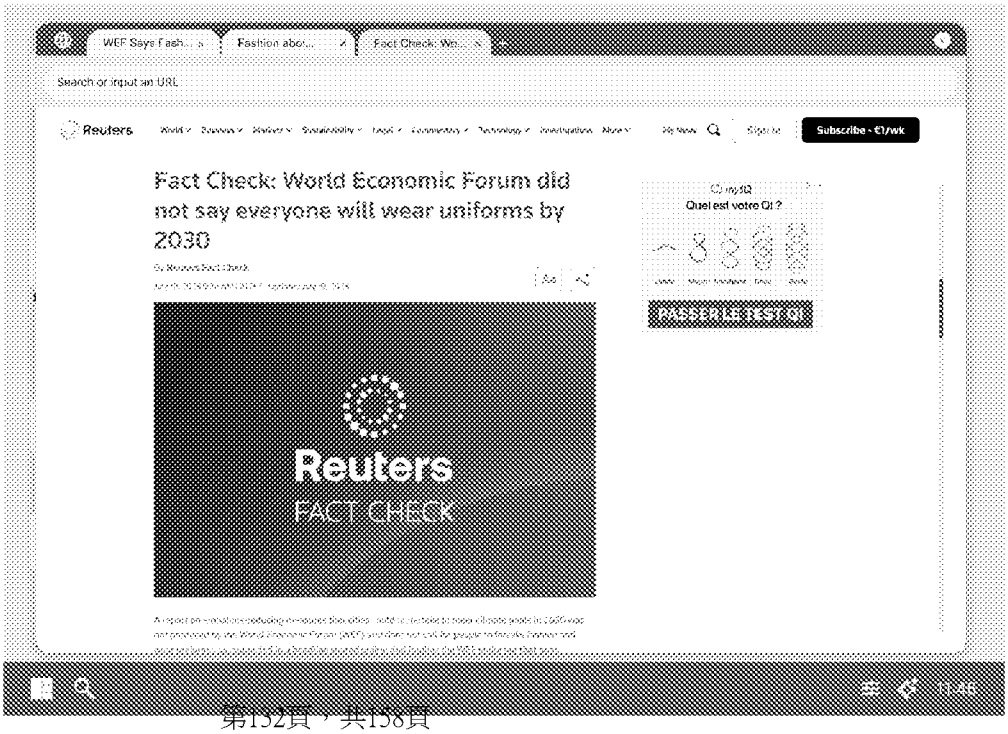


Figure 5.6. Example of Multiple Tabs Showing Different Webpages in Browser



↳ Response Submission

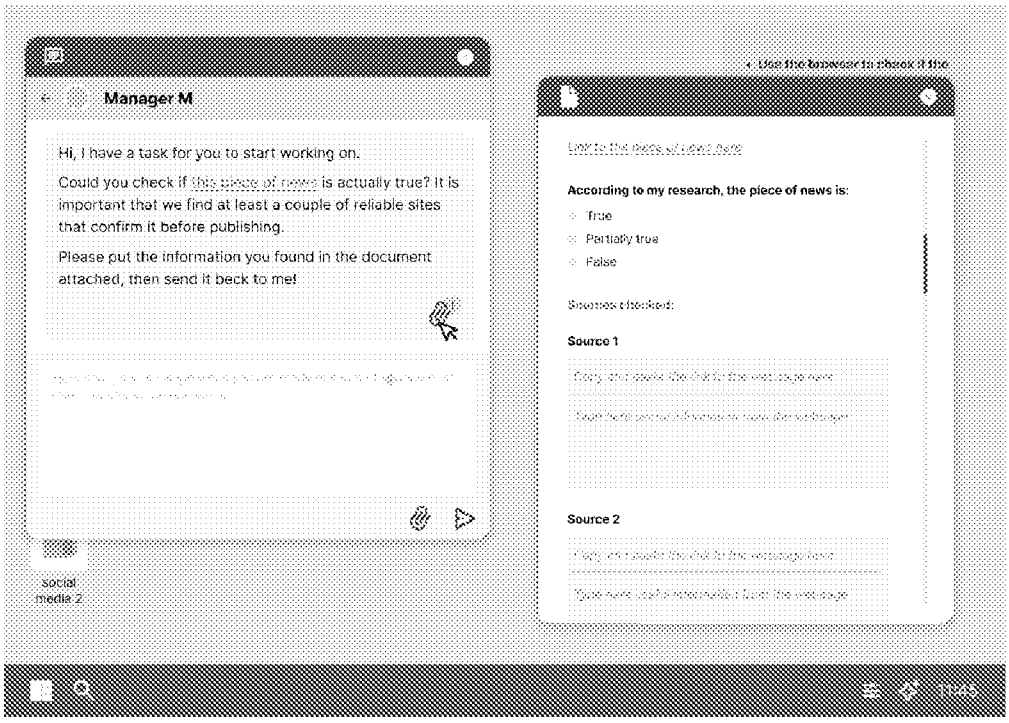
Lastly, after having checked different sources, and feeling confident in their judgment, students submit the results from their analysis (e.g. searching the author of the articles and/or websites) to the manager that assigned them the task, alongside the relevant evidence that helped them make the decision.

As described before, students submit their response and supporting sources through the chat tool (see **Figure 5.2** for original example). However, **Figure 5.7** shows an alternative response submission in which, instead of crafting a message with their response, students could be asked to download a pre-formatted document with a specific response structure (i.e. media claim verification steps), which they would have to complete and then send back as attachment in their response message. Using this alternative modality would allow for evidence of students' ability to download and locally save content (e.g. access and engage competency) and to send digital content to others (e.g. participate and collaborate competency).

The students are thanked for their help during the task and told that they should be certain of their responses as this will impact the reputation of the newspaper company. If students want to move forward in the assignment, they can click on a "Next" button, which would move them to the next task. If students want to check their response further, they could indicate so by clicking, for example, an "I need more time" button.

Lastly, after this media-heavy task, students could be asked to create a social media post requiring them to use a simulated AI system (e.g. to prompt a picture or to polish a social media caption).

Figure 5.7. Example of Alternative Delivery of Response Submission



References

Adams, C. et al. (2023), "Ethical principles for artificial intelligence in K-12 education", Computers and Education: Artificial Intelligence, Vol. 4, p. 100131, https://doi.org/10.1016/j.caeai.2023.100131. ..[25]

Agrawal, A., J. Gans and A. Goldfarb (2022), Prediction Machines, Updated and Expanded: The Simple Economics of Artificial Intelligence., Harvard Business Press. ..[32]

Akter, S. et al. (2021), "Algorithmic bias in data-driven innovation in the age of AI", International Journal of Information Management, Vol. 60, p. 102387, https://doi.org/10.1016/j.ijinfomgt.2021.102387. ..[106]

Allen, L. and P. Kendeou (2023), "ED-AI Lit: An Interdisciplinary Framework for AI Literacy in Education", Policy Insights from the Behavioral and Brain Sciences, Vol. 11/1, pp. 3-10, https://doi.org/10.1177/23727322231220339. ..[85]

Anantrasirichai, N. and D. Bull (2021), "Artificial intelligence in the creative industries: a review", Artificial Intelligence Review, Vol. 55/1, pp. 589-656, https://doi.org/10.1007/s10462-021-10039-7. ..[100]

Arendt, F. (2013), "Dose-Dependent Media Priming Effects of Stereotypic Newspaper Articles on Implicit and Explicit Stereotypes", Journal of Communication, Vol. 63/5, pp. 830-851, https://doi.org/10.1111/jcom.12056. ..[46]

Atari, M. et al. (2023), Which Humans?, Center for Open Science, https://doi.org/10.31234/osf.io/5b26t. ..[131]

Backstrom, L. et al. (2006), "Group formation in large social networks", Proceedings of the 12th ACM SIGKDD international conference on Knowledge discovery and data mining, https://doi.org/10.1145/1150402.1150412. ..[4]

Bateman, J. and D. Jackson (2024), Countering Disinformation: An Evidence Based Policy Guide. Carnegie Endowment for International Peace..[64]

Baudrillard, J. (1998 [1970]), The Consumer Society: Myths and Structures., Thousand Oaks. ..[101]

Bawden, D. and L. Robinson (2008), "The dark side of information: overload, anxiety and other paradoxes and pathologies", Journal of Information Science, Vol. 35/2, pp. 180-191, https://doi.org/10.1177/0165551508095781. ..[69]

Borhan, H. (2025), "Civic education as a pathway to inclusive societies: Exploring the role of education in fostering civic and social engagement", OECD Education Working Papers, No. 326, OECD Publishing, Paris, https://doi.org/10.1787/3f128be8-en. ..[114]

Buchanan, T. et al. (2006), "Development of measures of online privacy concern and protection for use on the Internet", Journal of the American Society for Information Science and Technology, Vol. 58/2, pp. 157-165, https://doi.org/10.1002/asi.20459. [121]

Burns, T. and F. Gottschalk (eds.) (2019), Educating 21st Century Children: Emotional Well-being in the Digital Age, Educational Research and Innovation, OECD Publishing, Paris, https://doi.org/10.1787/b7f33425-en. [3]

Cacioppo, J., S. Cacioppo and R. Petty (2017), "The neuroscience of persuasion: A review with an emphasis on issues and opportunities", Social Neuroscience, Vol. 13/2, pp. 129-172, https://doi.org/10.1080/17470919.2016.1273851. [105]

Caulfield, M. and S. Wineburg (2023), Verified: How to think straight, get duped less, and make better decisions about what to believe online, University of Chicago Press. [130]

Center for Humane Technology (2021), The attention economy. [34]

Chalaby, J. (2000), "New Media, New Freedoms, New Threats", Gazette, Vol. 62, pp. 19 - 29, https://api.semanticscholar.org/CorpusID:146138103. [9]

Chen, S., S. Salleh and M. Salleh (2025), "Media and information literacy among pre-service teachers: A systematic review of key trends and gaps (2013–2024)", International Journal of Information Management Data Insights, Vol. 5/2, p. 100348, https://doi.org/10.1016/j.jjimei.2025.100348. [65]

Chergarova, V. et al. (2022), "Cryptocurrency fraud: A study on the characteristics of criminals who are using fake profiles on a social media platform to persuade individuals to invest into cryptocurrency", Issues In Information Systems, Vol. 23/3, pp. 242-252, https://doi.org/10.48009/3_iis_2022_120. [48]

Christakis, D. and L. Hale (eds.) (2025), Handbook of Children and Screens, Springer Nature Switzerland, Cham, https://doi.org/10.1007/978-3-031-69362-5. [36]

Davis, K. (2023), Technology's child: Digital media's role in the ages and stages of growing up., MIT Press. [129]

Deci, E. and R. Ryan (2000), "The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior", Psychological Inquiry, Vol. 11/4, pp. 227-268, https://doi.org/10.1207/s15327965pli1104_01. [115]

DiResta, R. (2024), Invisible rulers: the people who turn lies into reality., Hachette UK. [51]

Dodel, M. and G. Mesch (2018), "Inequality in digital skills and the adoption of online safety behaviors", Information, Communication & Society, Vol. 21/5, pp. 712-728, https://doi.org/10.1080/1369118X.2018.1428652. [52]

Ecker, U. et al. (2025), "Why misinformation must not be ignored.", American Psychologist, Vol. 80/6, pp. 867-878, https://doi.org/10.1037/amp0001448. [50]

European Commission (2022), Guidelines for teachers and educators on tackling disinformation and promoting digital literacy through education and training., Publications Office of the European Union, https://data.europa.eu/doi/10.2766/28248. [125]

European Commission (2020b), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Digital Education Action Plan 2021-2027 Resetting education and training for the digital age. [55]

European Commission (2020a), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the European Democracy Action Plan. [54]

Fazio, L. et al. (2024), Combating misinformation: A megastudy of nine interventions designed to reduce the sharing of and belief in false and misleading headlines, Center for Open Science, https://doi.org/10.31234/osf.io/uyjha. [42]

Formosa, P. et al. (2024), "Can ChatGPT be an author? Generative AI creative writing assistance and perceptions of authorship, creatorship, responsibility, and disclosure", AI & SOCIETY, Vol. 40/5, pp. 3405-3417, https://doi.org/10.1007/s00146-024-02081-0. [86]

Fosco, C. et al. (2022), Deepfake Caricatures: Amplifying attention to artifacts increases deepfake detection by humans and machines, https://doi.org/10.48550/arXiv.2206.00535. [6]

Fulsher, A., M. Pagkratidou and P. Kendeou (2025), "GenAI and misinformation in education: a systematic scoping review of opportunities and challenges", AI & SOCIETY, https://doi.org/10.1007/s00146-025-02536-y. [11]

Gagrčin, E. et al. (2022), "What Makes a Good Citizen Online? The Emergence of Discursive Citizenship Norms in Social Media Environments", Social Media + Society, Vol. 8/1, https://doi.org/10.1177/20563051221084297. [136]

Gonzalez-Mohino, M. et al. (2023), "Empowering Critical Thinking: The Role of Digital Tools in Citizen Participation", Journal of New Approaches in Educational Research, Vol. 12/2, pp. 258-275, https://doi.org/10.7821/naer.2023.7.1385. [7]

Gordon, E. and P. Mihailidis (2022), Civic media: Technology, design, practice., MIT Press. [84]

Gu, X. and B. Ericson (2025), "AI Literacy in K-12 and Higher Education in the Wake of Generative AI: An Integrative Review", Proceedings of the 2025 ACM Conference on International Computing Education Research V.1, pp. 125-140, https://doi.org/10.1145/3702652.3744217. [21]

Habermas, J. (2022), "Reflections and Hypotheses on a Further Structural Transformation of the Political Public Sphere", Theory, Culture & Society, Vol. 39/4, pp. 145-171, https://doi.org/10.1177/02632764221112341. [31]

Haider, J. and O. Sundin (2022), Paradoxes of Media and Information Literacy, Routledge, London, https://doi.org/10.4324/9781003163237. [19]

Hall, S. (2009), "3 'Encoding/Decoding'", in Media Studies, Edinburgh University Press, https://doi.org/10.1515/9781474473231-005. [45]

Hancock, J., M. Naaman and K. Levy (2020), "AI-Mediated Communication: Definition, Research Agenda, and Ethical Considerations", Journal of Computer-Mediated Communication, Vol. 25/1, pp. 89-100, https://doi.org/10.1093/jcmc/zmz022. [71]

Hilbert, M. (2020), "Digital technology and social change: the digital transformation of society from a historical perspective", Dialogues in Clinical Neuroscience, Vol. 22/2, pp. 189-194, https://doi.org/10.31887/dcns.2020.22.2/mhilbert. [2]

Hill, J. (2022), "Policy responses to false and misleading digital content: A snapshot of children's media literacy", OECD Education Working Papers, No. 275, OECD Publishing, Paris, https://doi.org/10.1787/1104143e-en. [26]

Hobbs, R. (2025), Media literacy in action: Questioning the media, Rowman & Littlefield. [20]

Hobbs, R. (2020), "Propaganda in an Age of Algorithmic Personalization: Expanding Literacy Research and Practice", Reading Research Quarterly, Vol. 55/3, pp. 521-533, https://doi.org/10.1002/rrq.301. [113]

Hobbs, R. (2010), Digital and Media Literacy: A Plan of Action. A White Paper on the Digital and Media Literacy Recommendations of the Knight Commission on the Information Needs of Communities in a Democracy. Aspen Institute.. [67]

Hobbs, R. et al. (2013), "Learning to engage: how positive attitudes about the news, media literacy, and video production contribute to adolescent civic engagement", Educational Media International, Vol. 50/4, pp. 231-246, https://doi.org/10.1080/09523987.2013.862364. [61]

Hobbs, R. and R. Frost (2003), "Measuring the acquisition of media-literacy skills", Reading Research Quarterly, Vol. 38/3, pp. 330-355, https://doi.org/10.1598/rrq.38.3.2. [119]

Holmes, W. et al. (2025), "Critical Studies of Artificial Intelligence and Education: Putting a Stake in the Ground.", SSRN, http://dx.doi.org/10.2139/ssrn.5391793. [30]

Hu, T. et al. (2024), "Generative language models exhibit social identity biases", Nature Computational Science, Vol. 5/1, pp. 65-75, https://doi.org/10.1038/s43588-024-00741-1. [43]

Introna, L. and F. Ilharco (2006), "On the Meaning of Screens: Towards a Phenomenological Account of Screenness", Human Studies, Vol. 29/1, pp. 57-76, https://doi.org/10.1007/s10746-005-9009-y. [29]

Jandrić, P. and S. Hayes (2020), "Postdigital We-Learn", Studies in Philosophy and Education, Vol. 39/3, pp. 285-297, https://doi.org/10.1007/s11217-020-09711-2 [135]

Jandrić, P. and J. Knox (2021), "The postdigital turn: Philosophy, education, research", Policy Futures in Education, Vol. 20/7, pp. 780-795, https://doi.org/10.1177/14782103211062713. [81]

Jandrić, P. et al. (2018), "Postdigital science and education", Educational Philosophy and Theory, Vol. 50/10, pp. 893-899, https://doi.org/10.1080/00131857.2018.1454000. [82]

Järvelä, S. et al. (2025), "Hybrid intelligence: Human–<scp>AI</scp> coevolution and learning", British Journal of Educational Technology, Vol. 56/2, pp. 455-468, https://doi.org/10.1111/bjet.13560. [87]

Jenkins, H. et al. (2009), Confronting the Challenges of Participatory Culture, The MIT Press, https://doi.org/10.7551/mitpress/8435.001.0001. [56]

Jiang, J., M. Vetter and B. Lucia (2024), "Toward a 'More-Than-Digital' AI Literacy: Reimagining Agency and Authorship in the Postdigital Era with ChatGPT", Postdigital Science and Education, Vol. 6/3, pp. 922-939, https://doi.org/10.1007/s42438-024-00477-1. [39]

Joinson, A. et al. (eds.) (2007), Social psychology of interactivity in human–website interaction, Oxford University Press. [98]

Kahne, J. and B. Bowyer (2019), "Can media literacy education increase digital engagement in politics?", Learning, Media and Technology, Vol. 44/2, pp. 211-224, https://doi.org/10.1080/17439884.2019.1601108. [60]

Kalai, A. et al. (2025), "Why Language Models Hallucinate", ArXiv Preprints, https://doi.org/10.48550/arXiv.2509.04664. [74]

Karaduman, S. (2015), "The Role of Critical Media Literacy in Further Development of Consciousness of Citizenship", Procedia - Social and Behavioral Sciences, Vol. 174, pp. 3039-3043, https://doi.org/10.1016/j.sbspro.2015.01.1095. [17]

Kasneci, E. et al. (2023), "ChatGPT for good? On opportunities and challenges of large language models for education", Learning and Individual Differences, Vol. 103, p. 102274, https://doi.org/10.1016/j.lindif.2023.102274. [63]

Kellner, D. and J. Share (2019), The Critical Media Literacy Guide, BRILL, https://doi.org/10.1163/9789004404533. [37]

Kendeou, P. (2024), "A Theory of Knowledge Revision: The Development of the KReC Framework", Educational Psychology Review, Vol. 36/2, https://doi.org/10.1007/s10648-024-09885-y. [110]

Kizgin, H. et al. (2019), "The impact of social networking sites on socialization and political engagement: Role of acculturation", Technological Forecasting and Social Change, Vol. 145, pp. 503-512, https://doi.org/10.1016/j.techfore.2018.09.010. [5]

Klein, L. et al. (2025), "Provocations from the Humanities for Generative AI Research", Computers and Society. [40]

Kosmyna, N. et al. (2025), "Your brain on chatgpt: Accumulation of cognitive debt when using an ai assistant for essay writing task", https://doi.org/10.48550/arXiv.2506.08872. [13]

Kozyreva, A. et al. (2023), "Critical ignoring as a core competence for digital citizens", Current Directions in Psychological Science, Vol. 32/1, pp. 81-88, https://doi.org/10.1177/09637214221121570. [58]

Krutka, D. et al. (2019), "Teaching "Against" Social Media: Confronting Problems of Profit in the Curriculum", Teachers College Record: The Voice of Scholarship in Education, Vol. 121/14, pp. 1-42, https://doi.org/10.1177/016146811912101410. [89]

Leadbeater, C. and P. Miller (2004), The pro-am revolution : how enthusiasts are changing our society and economy, Demos, https://demos.co.uk/wp-content/uploads/files/proamrevolutionfinal.pdf. [1]

Leu, D. et al. (2013), "The new literacies of online research and comprehension: Rethinking the reading achievement gap", Reading Research Quarterly, Vol. 48/4, pp. 329-352. [94]

Lewandowsky, S. et al. (2023), "Misinformation and the epistemic integrity of democracy", Current Opinion in Psychology, Vol. 54, p. 101711, https://doi.org/10.1016/j.copsyc.2023.101711. [68]

Lewandowsky, S. et al. (2012), "Misinformation and Its Correction", Psychological Science in the Public Interest, Vol. 13/3, pp. 106-131, https://doi.org/10.1177/1529100612451018. [108]

Lin, Z. et al. (2024), "Malla: Demystifying Real-world Large Language Model Integrated Malicious Services", ArXiv Preprints., https://doi.org/10.48550/arXiv.2401.03315. [49]

Lippmann, W. (2018/1922), Public Opinion, Suzeteo Enterprises. [44]

Livingstone, S. (2004), "What is media literacy?", Intermedia, Vol. 32. [16]

Livingstone, S. et al. (2021), Media and Information Literacy Among Children on Three Continents: Insights into the Measurement and Mediation of Well-being, Corporación Universitaria Minuto de Dios-UNIMINUTO. [127]

Lotz, A. (2021), Media Disrupted, The MIT Press, https://doi.org/10.7551/mitpress/13868.001.0001. [28]

Macgilchrist, F. (2021), "What is 'critical' in critical studies of edtech? Three responses", Learning, Media and Technology, Vol. 46/3, pp. 243-249, https://doi.org/10.1080/17439884.2021.1958843. ..... [62]

Machackova, H. (2024), "Digital skills among youth: A dataset from a three-wave longitudinal survey in six European countries", Data in Brief, Vol. 54, https://doi.org/110396. ..... [47]

Maertens, R. et al. (2023), "The Misinformation Susceptibility Test (MIST): A psychometrically validated measure of news veracity discernment", Behavior Research Methods, Vol. 56/3, pp. 1863-1899, https://doi.org/10.3758/s13428-023-02124-2. ..... [122]

Maertens, R. et al. (2021), "Long-term effectiveness of inoculation against misinformation: Three longitudinal experiments.", Journal of Experimental Psychology: Applied, Vol. 27/1, pp. 1-16, https://doi.org/10.1037/xap0000315. ..... [77]

Maertens, R. et al. (2023), Misleading But Not Fake: Measuring the Difference Between Manipulativeness Discernment and Veracity Discernment Using Psychometrically Validated Tests, Center for Open Science, https://doi.org/10.31234/osf.io/tckp4. ..... [123]

Maleki, N., B. Padmanabhan and K. Dutta (2024), "AI Hallucinations: A Misnomer Worth Clarifying", 2024 IEEE Conference on Artificial Intelligence (CAI), https://doi.org/10.1109/cai59869.2024.00033. .. [73]

Manca, S., S. Bocconi and B. Gleason (2021), ""Think globally, act locally": A glocal approach to the development of social media literacy", Computers & Education, Vol. 160, p. 104025, https://doi.org/10.1016/j.compedu.2020.104025. ..... [83]

Martens, H. and R. Hobbs (2015), "How Media Literacy Supports Civic Engagement in a Digital Age", Atlantic Journal of Communication, Vol. 23/2, pp. 120-137, https://doi.org/10.1080/15456870.2014.961636. ..... [59]

McKenna, R. (2025), "The Ethics and Epistemology of Persuasion", Canadian Journal of Philosophy, pp. 1-15, https://doi.org/10.1017/can.2025.10005. ..... [138]

Metzger, M. and A. Flanagin (2013), "Credibility and trust of information in online environments: The use of cognitive heuristics", Journal of Pragmatics, Vol. 59, pp. 210-220, https://doi.org/10.1016/j.pragma.2013.07.012. ..... [76]

Mihailidis, P. (2018), "Civic media literacies: re-Imagining engagement for civic intentionality", Learning, Media and Technology, Vol. 43/2, pp. 152-164, https://doi.org/10.1080/17439884.2018.1428623. [112]

Mihailidis, P., S. Shresthova and M. Fromm (2021), Transformative Media Pedagogies, Routledge, New York, https://doi.org/10.4324/9781003031246. ..... [128]

Napoli, P. (2012), "Audience Evolution and the Future of Audience Research", International Journal on Media Management, Vol. 14/2, pp. 79-97, https://doi.org/10.1080/14241277.2012.675753. ..... [35]

National Research Council (2000), How People Learn, National Academies Press, https://doi.org/10.17226/9853.....[97]

Ng, A. (2021), AI literacy: Developing an understanding of artificial intelligence. AI Alignment.....[103]

Ng, D. et al. (2021), "Conceptualizing AI literacy: An exploratory review", Computers and Education: Artificial Intelligence, Vol. 2, p. 100041, https://doi.org/10.1016/j.caeai.2021.100041. .....[22]

Ng, D. et al. (2023), "Design and validation of the <scp>AI</scp> literacy questionnaire: The affective, behavioural, cognitive and ethical approach", British Journal of Educational Technology, Vol. 55/3, pp. 1082-1104, https://doi.org/10.1111/bjet.13411. .....[118]

Nygren, T. (2025), Artificial Intelligence in Schools: Educational Challenges and Opportunities, Cambridge University Press. .....[15]

Nygren, T. et al. (2025), The Seven Roles of Artificial Intelligence: Potential and Pitfalls in Combating Misinformation, Center for Open Science, https://doi.org/10.31219/osf.io/j4gtv_v1.....[91]

OECD (2025), Empowering learners for the age of AI: An AI literacy framework for primary and secondary education (Review draft), OECD.....[18]

O'Reilly, M. (2020), "Social media and adolescent mental health: the good, the bad and the ugly", Journal of Mental Health, Vol. 29/2, pp. 200-206, https://doi.org/10.1080/09638237.2020.1714007. [12]

Ognyanova, K. (ed.) (2024), "The persuasive effects of political microtargeting in the age of generative artificial intelligence", PNAS Nexus, Vol. 3/2, https://doi.org/10.1093/pnasnexus/pgae035.....[107]

Örtegren, A. (2023), "Philosophical underpinnings of digital citizenship through a postdigital lens: Implications for teacher educators' professional digital competence", Education and Information Technologies, Vol. 29/4, pp. 4253-4285, https://doi.org/10.1007/s10639-023-11965-5. .....[80]

Pangrazio, L. and J. Sefton-Green (2021), "Digital Rights, Digital Citizenship and Digital Literacy: What's the Difference?", Journal of New Approaches in Educational Research, Vol. 10/1, pp. 15-27, https://doi.org/10.7821/naer.2021.1.616. .....[38]

Park, S. et al. (2023), "Exploring the relationship between media literacy, online interaction, and civic engagement", The Information Society, Vol. 39/4, pp. 250-261, https://doi.org/10.1080/01972243.2023.2211055.....[57]

Park, Y. (2013), "Digital Literacy and Privacy Behavior Online", Communication Research, doi: 10.1177/0093650211418338, pp. 215-236, https://doi.org/10.1177/0093650211418338. .....[24]

Pennycook, G. and D. Rand (2021), "The Psychology of Fake News", Trends in Cognitive Sciences, Vol. 25/5, pp. 388-402, https://doi.org/10.1016/j.tics.2021.02.007. .....[75]

Petty, R. and J. Cacioppo (1986), "The Elaboration Likelihood Model of Persuasion", in Advances in Experimental Social Psychology, Elsevier, https://doi.org/10.1016/s0065-2601(08)60214-2. ..... [104]

Roozenbeek, J., M. Remshard and Y. Kyrychenko (2024), "Beyond the headlines: On the efficacy and effectiveness of misinformation interventions", advances.in/psychology, Vol. 2/1, https://doi.org/10.56296/aip00019. ..... [27]

Roozenbeek, J. and S. van der Linden (2024), The psychology of misinformation, Cambridge University Press. ..... [78]

Roozenbeek, J. et al. (2022), "Psychological inoculation improves resilience against misinformation on social media", Science Advances, Vol. 8/34, https://doi.org/10.1126/sciadv.abo6254. ..... [109]

Ruiz, P. et al. (2024), AI Literacy: A Framework to Understand, Evaluate, and Use Emerging Technology, Digital Promise, https://doi.org/10.51388/20.500.12265/218. ..... [134]

Sahoo, S. et al. (2024), "Artificial intelligence capabilities, open innovation, and business performance – Empirical insights from multinational B2B companies", Industrial Marketing Management, Vol. 117, pp. 28-41, https://doi.org/10.1016/j.indmarman.2023.12.008. ..... [72]

Schmid, R., C. Pauli and D. Petko (2022), "Examining the use of digital technology in schools with a school-wide approach to personalized learning", Educational technology research and development, Vol. 71/2, pp. 367-390, https://doi.org/10.1007/s11423-022-10167-z. ..... [8]

Schreurs, L. and L. Vandenbosch (2021), "Introducing the Social Media Literacy (SMILE) model with the case of the positivity bias on social media", Journal of Children and Media, doi: 10.1080/17482798.2020.1809481, pp. 320-337, https://doi.org/10.1080/17482798.2020.1809481. ..... [23]

Siemens, G. (2005), "Connectivism: A learning theory for the digital age", International Journal of Instructional Technology and Distance Learning, Vol. 2/1. ..... [137]

Simon, F., S. Altay and H. Mercier (2023), "Misinformation reloaded? Fears about the impact of generative AI on misinformation are overblown", Harvard Kennedy School Misinformation Review, https://doi.org/10.37016/mr-2020-127. ..... [111]

Sperber, D. et al. (2010), "Epistemic Vigilance", Mind & Language, Vol. 25/4, pp. 359-393, https://doi.org/10.1111/j.1468-0017.2010.01394.x. ..... [132]

Stanovich, K. and M. Toplak (2023), "Actively Open-Minded Thinking and Its Measurement", Journal of Intelligence, Vol. 11/2, p. 27, https://doi.org/10.3390/jintelligence11020027. ..... [117]

Stoilova, M., S. Livingstone and D. Kardefelt-Winther (2016), "Global Kids Online: Researching children's rights globally in the digital age", Global Studies of Childhood, Vol. 6/4, pp. 455-466, https://doi.org/10.1177/2043610616676035. ..... [124]

Sundar, S. (2020), "Rise of Machine Agency: A Framework for Studying the Psychology of Human–AI Interaction (HAII)", Journal of Computer-Mediated Communication, Vol. 25/1, pp. 74-88, https://doi.org/10.1093/jcmc/zmz026. [102]

Terenzi, M. (2024), "Modeling Persuasion in Social Media", Journal of Sociocybernetics, Vol. 19/1, https://doi.org/10.26754/ojs_jos/jos.2024110992. [66]

Third, A., S. Livingstone and G. Lansdown (2025), Recognizing children's rights in relation to the digital environment: challenges of voice and evidence, principle and practice, Edward Elgar. [126]

Tiernan, P. et al. (2023), "Information and Media Literacy in the Age of AI: Options for the Future", Education Sciences, Vol. 13/9, p. 906, https://doi.org/10.3390/educsci13090906. [70]

Tlili, A. et al. (2023), "What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education", Smart Learning Environments, Vol. 10/1, https://doi.org/10.1186/s40561-023-00237-x. [14]

Trattner, C. et al. (2022), "Responsible media technology and AI: challenges and research directions", AI and Ethics, Vol. 2/4, pp. 585-594, https://doi.org/10.1007/s43681-021-00126-4. [10]

Hope, A. (2021), "Media, making & movement: Bridging media literacy and racial justice through critical media project.", Journal of Media Literacy Education, Vol. 13/1, pp. 43-54. [33]

Valkenburg, P., J. Peter and J. Walther (2016), "Media Effects: Theory and Research", Annual Review of Psychology, Vol. 67/1, pp. 315-338, https://doi.org/10.1146/annurev-psych-122414-033608. [99]

Van Bavel, J. et al. (2021), "How social media shapes polarization", Trends in Cognitive Sciences, Vol. 25/11, pp. 913-916, https://doi.org/10.1016/j.tics.2021.07.013. [133]

Van Laar, E. et al. (2025), "Developing Performance Tests to Measure Digital Skills: Lessons Learned From a Cross-National Perspective", Media and Communication, Vol. 13, https://doi.org/10.17645/mac.8988. [88]

Vraga, E. and M. Tully (2019), "News literacy, social media behaviors, and skepticism toward information on social media", Information, Communication & Society, Vol. 24/2, pp. 150-166, https://doi.org/10.1080/1369118x.2019.1637445. [41]

Vygotsky, L. (1978), Mind in society: The development of higher psychological processes, Harvard University Press. [92]

Wineburg, S. and S. McGrew (2019), "Lateral Reading and the Nature of Expertise: Reading Less and Learning More When Evaluating Digital Information", Teachers College Record: The Voice of Scholarship in Education, Vol. 121/11, pp. 1-40, https://doi.org/10.1177/016146811912101102. [79]

Winne, P. (2020), "Open Learner Models Working in Symbiosis With Self-Regulating Learners: A Research Agenda", International Journal of Artificial Intelligence in Education, Vol. 31/3, pp. 446-459, https://doi.org/10.1007/s40593-020-00212-4. [93]

Winne, P. (1996), "A metacognitive view of individual differences in self-regulated learning", Learning and Individual Differences, Vol. 8/4, pp. 327-353, https://doi.org/10.1016/s1041-6080(96)90022-9. [95]

Yuan, Z., X. Cheng and Y. Duan (2024), "Impact of media dependence: how emotional interactions between users and chat robots affect human socialization?", Frontiers in Psychology, Vol. 15, https://doi.org/10.3389/fpsyg.2024.1388860. [90]

Zhang, B. and A. Dafoe (2019), "Artificial Intelligence: American Attitudes and Trends", SSRN Electronic Journal, https://doi.org/10.2139/ssrn.3312874. [116]

Zhong, B. and X. Liu (2025), "Evaluating AI literacy of secondary students: Framework and scale development", Computers & Education, Vol. 227, p. 105230, https://doi.org/10.1016/j.compedu.2024.105230. [120]

Zimmerman, B. (1986), "Becoming a self-regulated learner: Which are the key subprocesses?", Contemporary Educational Psychology, Vol. 11/4, pp. 307-313, https://doi.org/10.1016/0361-476x(86)90027-5. [96]

[illegible]boff, S. (2019), The age of surveillance capitalism: The fight for a human future at the new frontier [illegible] power, Public Affairs. [53]

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國家教育研究院計畫申請書

壹、基本資料：　　研究計畫編號：

本計畫主持人姓名			職稱	
本計畫名稱	中文			
	英文			
全程執行期限		自民國 116 年 1 月 1 日起至民國 120 年 6 月 30 日止		
計畫連絡人		姓名：_____ 電話：(公)_____　(宅/手機)_____ E-Mail：		
對教育(政策)的預期貢獻				
中文摘要				
中文關鍵詞				
英文摘要				
英文關鍵詞				

（※中英文摘要、對教育(政策)的預期貢獻為必填欄位）

申請人簽章：_____　　日期：_____

貳、計畫人力

請依照「計畫主持人」、「共同主持人」、「專任助理」等類別之順序分別填寫。

姓名	本計畫職級	服務單位與職稱	在本研究計畫內擔任之 具體工作性質、項目及範圍	備註

參、執行經費

年度		總計經費 （單位：新臺幣元）	備註
第 1 年 2027 (116/01/01~116/12/31)	人事費		
	業務費		
	設備費		
第 2 年 2028 (117/01/01~117/12/31)	人事費		
	業務費		
	設備費		
第 3 年 2029 (118/01/01~118/12/31)	人事費		
	業務費		
	設備費		
第 4 年 2030 (119/01/01~119/12/31)	人事費		
	業務費		
	設備費		
第 5 年 2031 (120/01/01~120/06/30)	人事費		
	業務費		
	設備費		
總計			

＊ 詳細明細填列於國教署委辦計畫經費申請表

肆、計畫內容及重點說明

(一)計畫之背景及目的。請詳述本計畫之背景、目的、重要性及國內外有關本計畫之研究情況、重要參考文獻之評述等。

(二)計畫執行方法、進行步驟及執行進度，請分年列述：

1. 本計畫採用之研究方法與原因。

2. 預計可能遭遇之困難及解決途徑。

3. 重要儀器之配合使用情形。

4. 如為須赴國外或大陸地區，請詳述其必要性以及預期成果等。

(三)對所蒐集資料保存管理方式、深度分析及成果發表之規劃

(四)預期完成之工作項目及成果，請分年列述：

1. 預期完成之工作項目。

2. 對於學術研究、國家發展及其他應用方面預期之貢獻。

3. 對於參與之工作人員，預期可獲之訓練。

(五)執行單位之支援事項。

附件一之三

教育部國民及學前教育署委辦計畫項目經費表

<table>
<tr><td colspan="3">計畫名稱：XXXX</td><td colspan="3"></td></tr>
<tr><td colspan="6">辦理方式：□行政委託　□行政指示　□行政協助</td></tr>
<tr><td colspan="6">計畫期程：　年　月　日至　年　月　日</td></tr>
<tr><td colspan="6">計畫經費總額：　元</td></tr>
<tr><td colspan="2" rowspan="2">經費項目</td><td colspan="4">計畫經費明細</td></tr>
<tr><td>單價（元）</td><td>數量</td><td>總價(元)</td><td colspan="2">說明</td></tr>
<tr><td rowspan="2">人事費</td><td></td><td></td><td></td><td></td><td colspan="2"></td></tr>
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<tr><td>小計</td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td>行政管理費</td><td></td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td rowspan="2">設備及投資</td><td></td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td>小計</td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td colspan="2">合　計</td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td colspan="6">受領人資訊：
一、　金融機構或中華郵政公司名稱與代號(包括分行別)：
二、　戶名：
三、　帳號：
四、　營利事業或扣繳單位統一編號：</td></tr>
</table>

附件一之三

教育部國民及學前教育署委辦計畫項目經費表

計畫名稱：XXXX	
辦理方式：□行政委託　□行政指示　□行政協助	
計畫期程：　年　月　日至　年　月　日	
計畫經費總額：　元	
備註： 一、　行政管理費按業務費之金額級距，分段乘算下列比率後加總： (一)業務費300萬元(含)以下者，得按業務費*10%以內編列。 (二)業務費超過300萬元以上部分，得按超過部分*5%以內編列。 二、　行政管理費上限為60萬元，但因特殊需要經本署同意者，不在此限。 三、　經費執行涉及須依「政府機關政策文宣規劃執行注意事項」及預算法第62條之1及其執行原則等相關規定辦理者，應明確標示其為「廣告」，且揭示教育部國民及學前教育署名稱，並不得以置入性行銷方式進行。 四、　經費動支應依中央政府各項經費支用規定及本要點經費編列基準表規定辦理。 五、　上述中央政府經費支用規定，得逕於「行政院主計總處網站-友善經費報支專區-內審規定」查詢參考。 六、　本經費表新增或勻支二級用途別經費項目，得由執行單位循內部行政程序自行辦理。 七、　依政府採購法辦理者，其預算經費表得參照本表辦理。	餘款繳回方式： □繳回 □不繳回 □依教育部補(捐)助及委辦經費核撥結報作業要點辦理，未執行項目經費（含人事費未依學歷職級或期程聘用人員致剩餘款）應繳回。 □執行率未達____%，計畫餘款應繳回。 □_____、_____經費項目不得支用其他項目，且該項目餘款應繳回。

國家教育研究院國際評比審查表

主持人：	服務機關：
計畫名稱：	

一、審查項目及評分：	%	分數
1.主持人與共同主持人專業能力		
(1)主持人之研究能力、執行國際性研究計畫之經驗、國內學界領導性	20	_____
(2)整體團隊在相關領域研究之能力 請列出不適擔任共同主持人之人員： _____	20	_____
2.計畫執行方式及步驟可行性（含計畫經費合理性，包括總經費及分年經費增刪建議等）	50	_____
3.所需資源之合理性及執行單位之配合度	10	_____

二、審查結果：

（　）通過，逕行會議複審（85-100）
（　）修正後通過，進入會議複審（71-84）
（　）不通過（70 分以下）

總分

三、審查意見：請針對上述審查項目給予建議

審查委員：

日　　期：　　年　　月　　日

國家教育研究院

NATIONAL ACADEMY *for* EDUCATIONAL RESEARCH

國家調查執行團隊同意書

_____同意「國際學生能力評量計畫（Organisation for Economic Co-operation and Development，PISA）2029」國家調查執行團隊將本人列為該計畫之

☐ 主持人

☐ 共同主持人

☐ 協同主持人

☐ 專家諮詢顧問

並於獲得優選始擔任該計畫之職務。

保密義務：簽署人於擔任該調查計畫職務起，於後續調查執行相關之執行工作、諮詢內容、調查材料、會議等資料，皆應遵守保密規定，未經本院同意不得散布、複製、傳送、告知或以任何其他方式揭露予非調查計畫相關之人、機關或團體，克盡保密義務及管理之責任。

計畫申請學校/單位：

計畫申請人：

簽署人：

服務單位：

聯絡電話：

聯絡電址：

中 華 民 國　　年　　月　　日

我國參加「OECD 國際學生能力評量計畫 2029（PISA 2029）」
國家調查執行團隊計畫徵求說明書

壹、案名

我國參加「OECD 國際學生能力評量計畫 2029（PISA 2029）」國家調查執行團隊徵求計畫

貳、背景及說明

教育部為參加經濟合作暨發展組織（Organisation for Economic Co-operation and Development，OECD）主辦之國際學生能力評量計畫（Programme for International Student Assessment，PISA）2029，特公開徵求國內調查執行團隊。邀請具執行大型教育評比調查實務經驗與研究專業之大專院校及研究機構，以同校、跨校等方式組成研究團隊，提出計畫申請。PISA 2029 簡介請參閱附件 1。

參、計畫期程

本案期程自 2027 年 1 月 1 日起至 2031 年 6 月 30 日止（以教育部國民及學前教育署簽約期程為主）。

肆、計畫執行重點需求：

計畫執行重點需求請詳閱附件 2 及附件 3，以下簡述重點：

一、組成 PISA 2029 國家研究中心

組成包括研究、行政、調查執行團隊成員之 PISA 2029 國家研究中心，綜整所有調查事務及職責，計畫主持人需擔任國家執行團隊主持人（National Project Manager，NPM）負責與 OECD PISA 國際調查中心聯繫與合作。

二、抽樣

（一）提供我國 15 歲學生之抽樣架構供 OECD 進行學校抽樣（含預試及正式施測）。

（二）以 PISA 總部要求進行樣本學校內之學生抽樣（含預試及正式施測）。

三、調查工具準備

（一）與 PISA 計畫各參加國共同協商發展全球性調查工具。

（二）在 OECD 規範下，適切增修符合我國國情之背景問卷題項。

（三）在 OECD 規範下，進行調查工具（含各科素養測驗工具、背景問卷題目與電腦化介面）之中文翻譯。

四、進行調查

（一）進行我國 15 歲群學生數學、閱讀與科學三大領域的能力調查研究；本次調查將以閱讀素養為主測領域，數學與科學為輔測領域，並以媒體與人工智慧素養（Media and Artificial Intelligence Literacy，簡稱 MAIL）為創新領域（詳見附件 4），採單機版電腦化評量。同時，將針對學生、教師及家長進行問卷調查。

（二）預計 2028 年預試，2029 年正式施測。

五、參加 OECD 舉行之 NPM 會議及訓練研習。每次參加人數 2 人，並請以 OCED 本部所在地（法國巴黎）預估經費。

六、報告撰寫

我國 15 歲學生數學、科學與閱讀素養分析及國際比較研究運用 PISA 調查之資料，深入分析，進行相關研究：

（一）我國學生閱讀（含各分項及綜合）、科學與數學素養分析。

（二）我國學生閱讀（含各分項及綜合）、科學與數學素養趨勢分析。

（三）我國學生閱讀（含各分項及綜合）、科學與數學素養與國際比較研究。

（四）以上分析結果應於 OECD 正式公佈結果前 1 個月，完成調查結果分析、與國際比較及對政策建議等之中、英文精簡報告；並於正式公佈結果日起 6 個月內完成中文完整國家報告後，繳交本院進行外部專家審查後出版。

（五）研究團隊須於 OECD 正式公佈結果前 1 個月，提供國內記者會簡報及新聞稿，並義務性參加與 OECD 同步之國內正式調查結果公佈記者會與會前會，計畫執行期間並需配合教育部不定期提供計畫相關問題之回應。

七、依國教署要求建置 PISA 2029 中文網頁。

八、需組成專家小組進行內部品質管控機制，並審查各項工具及文件中譯本的適切性。

伍、計畫申請

一、申請本計畫，請依規定將相關資料（紙本 1 式 5 份）請於 **2026 年 5 月 29 日 17 時 30 分前**寄達申請資料（地址：237201 新北市三峽區三樹路 2 號，國際評比辦公室收），並由機關具文提出申請，執行期間從 **2027 年 1 月 1 日起至 2031 年 6 月 30 日止**。

二、本案通過後，將由教育部逕與研究團隊簽屬行政協議書，並核撥經費。其他未盡事項及相關經費編列依據，請參考「教育部委辦及補助編列基

準表」及「教育部委辦及補助核撥結報作業要點」規定辦理。

三、本計畫為本院協助教育部國民及學前教育署（以下簡稱國教署）徵選團隊，確認後將以行政協助方式，由國教署向獲選團隊進行協議書簽約、採逐年方式經費審查及經費付款事宜。

四、本計畫經費將視審核結果進行調整，並應各年度相關公務預算經行政院及立法院審查結果辦理。即若各年度所需經費未獲立法院審議通過或部分刪除，得終止契約；若經費遭刪減，則以預算經法定程序審查通過之金額為準，該金額由本院調整後另行通知。如機關預算遭凍結不能如期動支，將延後辦理無息支付。

陸、 計畫書製作及申請期限：

一、計畫內容：

（一）整體計畫及分項計畫之名稱、目的、文獻評述、計畫進行方式、步驟、執行進度。

（二）計畫總主持人、共同主持人、及研究團隊之個人資料、學經歷、專長、以及參與本計畫之特殊考慮，工作任務等。

（三）專家諮詢顧問之組成及運作模式（需取得專家諮詢顧問簽名之同意書，附件 8）

（四）對所蒐集資料保存管理、進行深度分析及成果發表之規劃。

（五）預期成果與應用、國際交流之構想等。

（六）申請單位配合提供之空間、電腦（工作站級）及相關設備、可運用之資源...等之說明及單位之承諾書。

（七）以上內容請載明於計畫申請書（附件 5）及經費表（附件 6）。

二、執行單位之支援。

三、人力及經費：本計畫分五期進行，請預估並述明所需之研究人力及相關經費（分期列明：第 1 期 2027 年 1 月 1 日至 2027 年 12 月 31 日，第 2 期 2028 年 1 月 1 日至 2028 年 12 月 31 日，第 3 期 2029 年 1 月 1 日至 2029 年 12 月 31 日，第 4 期 2030 年 1 月 1 日至 2030 年 12 月 31 日，第 5 期 2031 年 1 月 1 日至 2031 年 6 月 30 日）。

四、製作格式：請依本院計畫書格式繕打，並檢附 1 式 5 份。另請檢附 1 份電子檔（光碟型式儲存）。

五、申請本計畫，請依規定於 2026 年 5 月 29 日 17 時 30 分前寄達申請資料（地址：237201 新北市三峽區三樹路 2 號，國際評比辦公室收），並由機

關具文向本院提出申請。

柒、計畫審查與評估

一、本計畫分為初審（專家書面審查）及複審（國際大型教育評比調查諮詢小組會議審查），於複審時，協請各計畫申請團隊 進行現場報告，報告時間為 15 分鐘，問答 15 分鐘，採統問統答方式辦理。

二、本計畫審查重點（附件 7）：

（一）主持人與共同主持人專業能力

1. 主持人及參與人員具執行國際性/大型調查計畫之經驗及能力（20%）
2. 整體團隊在相關領域研究之能力（20%）

（二）計畫執行方式與步驟（含計畫經費合理性，包括總經費及分年經費增刪建議等）（50%）

（三）所需資源之合理性及執行單位之配合程度（10%）

捌、計畫團隊注意事項：

一、所有團隊成員需遵守並簽署 OECD 所規定之任何保密協定、執行進度、資料釋出規定，以免影響我國在國際組織之權益。

二、計畫執行期間所蒐集之資料及執行成果等智慧財產權屬教育部，未經機關同意不得擅自對外發表。

三、計畫執行期間所蒐集之資料及分析結果，計畫團隊需協助完整保存及管理，並遵循行政協助協議書規範期程，於計畫結束後，整理相關資料並繳回本院。

玖、相關附件：

一、附件 1：PISA 2029 Brochure

二、附件 2：PISA 2029 Technical Standards

三、附件 3：PISA 2029 International options

四、附件 4：PISA 2029 MAIL Assessment Framework First Draft

五、附件 5：國家教育研究院計畫申請書（PISA 2029）

六、附件 6：教育部國民及學前教育署委辦計畫項目經費表

七、附件 7：國家教育研究院國際評比審查表（PISA 2029）

八、附件 8：國家調查執行團隊同意書（PISA 2029）