## Why is ICILS important?

ICILS provides a unique opportunity to compare the computer and information literacy of U.S. eighth-grade students with that of their peers in countries around the world. ICILS complements what we learn from national assessments by identifying the strengths and weaknesses of student performance relative to students internationally. The results inform national discussions about computer literacy as well as international competitiveness.

ICILS provides valuable benchmark information on how U.S. students compare with students around the world, allows educators and policymakers to examine other education systems for practices that could have application to the United States, and contributes to ongoing discussions of ways to improve the quality of education of all students using technology.

## What type of assessment is ICILS?

ICILS is a computer-based assessment. It is developed through an international collaborative process involving input from U.S. and international experts in computer and information literacy and measurement. As a final step, the assessment is endorsed as suitable by all participating countries. The assessment contains a mix of interactive computer tasks.

Examples of released ICILS items may be found in the 2018 ICILS report, "Preparing for Life in a Digital World", at https://www.iea.nl/index.php/publications/study-reports/international-reports-iea-studies/preparing-life-digital-world on pp. 60-62 and pp. 94-95.

# International Computer and Information Literacy Study (ICILS) 2023

### Contact Information

**Toll-Free Help Desk**: 800-611-0338

**Email**: ICILS@rti.org

**Learn more at:**
https://surveys.nces.ed.gov/ICILS

RTI INTERNATIONAL

Data collected by RTI International on behalf of the U.S. Department of Education

OMB Control Number: 1850-0929

The National Center for Education Statistics (NCES) is authorized to conduct this study under the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543), and to collect students' education records from educational agencies or institutions for the purpose of evaluating federally supported education programs under the Family Educational Rights and Privacy Act (FERPA, 34 CFR §§ 99.31(a)(3)(iii) and 99.35). All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). In the United States, ICILS is conducted by NCES, part of the U.S. Department of Education, and the data are being collected by RTI International. The U.S. Office of Management and Budget has approved the data collection under OMB #1850-0929.

IES Institute of Education Sciences

# International Computer and Information Literacy Study (ICILS) 2023

*The National Center for Education Statistics at IES*

## What is ICILS?

The International Computer and Information Literacy Study (ICILS) is an international assessment and research project designed to measure computer and information literacy achievement at the eighth grade, as well as school and teacher practices related to instruction. ICILS is developed internationally as a response to the increasing use of information and communication technology (ICT) in modern society and the need for citizens to develop relevant skills in order to participate effectively in the digital age. The United States participated in ICILS in 2018 along with 13 other education systems and will participate again in 2023. ICILS 2023 will include students from approximately 30 education systems.

ICILS is sponsored by the International Association for the Evaluation of Educational Achievement (IEA) and conducted in the United States by the National Center for Education Statistics (NCES), part of the U.S. Department of Education.

*How do the U.S. eighth graders compare internationally?*

## Results from ICILS 2018

### Computer & Information Literacy (CIL)

There were four different levels of computer and information literacy (CIL) proficiency, ranging from Level 1 to Level 4. In the United States, 25 percent of eighth-grade students reached at least Level 3, demonstrating the "capacity to work independently when using computers as information gathering and management tools." This percentage was higher than the ICILS 2018 average among all countries but lower than in four other education systems–Finland, Moscow, Denmark, and Republic of Korea.

### Computational Thinking (CT)

Twenty percent of U.S. eighth graders scored in the upper CT performance region. U.S. eighth graders scored on par with the international average in CT. The United States ranked fifth among nine education systems.

### U.S. Achievement by Demographics

Female U.S. students demonstrated higher CIL achievement than male U.S. students, whereas CT achievement was higher for male U.S. students than for female U.S. students. Students in U.S. schools with fewer than 10 percent of students eligible for free or reduced-price lunch (FRPL) had higher average CIL and CT scores than students in schools with higher percentages of students eligible for FRPL.

Additional ICILS 2018 results can be found at https://nces.ed.gov/surveys/icils/icils2018/theme1.asp

## Countries participating in ICILS 2023

### Countries

**Europe**

Austria
Croatia
Czech Republic
Denmark
Finland
France
Germany
Hungary
Italy
Kosovo
Lithuania
Luxembourg
Malta
The Netherlands
Norway
Poland
Portugal
Romania
Serbia
Slovak Republic
Slovenia
Spain
Sweden
Switzerland
Turkey

**North and South America**

Chile
United States
Uruguay

**Asia and Middle East**

Azerbaijan
Chinese Taipei
Hong Kong SAR
Kazakhstan
Korea, Rep. of
Oman
Russian Federation
Thailand

**Australia and Oceania**

Australia

### Benchmarking participants

Belgium (Flemish)
City of Buenos Aires-ARG
Moscow-RUS
Newfoundland & Labrador-CAN
North Rhine-Westphalia-DEU
Ontario-CAN

**Source: https://nces.ed.gov/surveys/icils/countries.asp**