

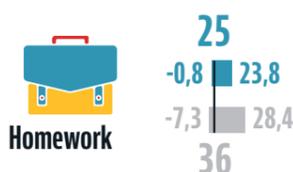
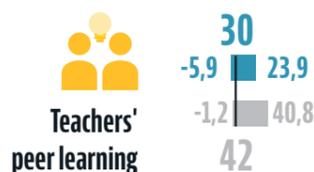
Japan 22 | Education Innovation Index

OECD average 30

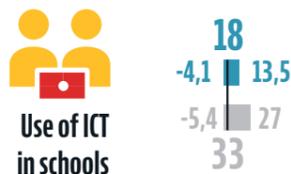
Innovation in education by category



Innovation in education by type of practice



ICT Innovation



Japan

Between 2006 and 2016, Japanese students have experienced little innovation in education, much less than their OECD peers. Innovation in secondary education was higher than at the system level. While data gaps prevented the calculation of a primary education innovation index, this suggests a much lower level of innovation at that level. In terms of discipline, pedagogical practices in science education changed roughly as much as in other countries. It is mainly in mathematics education that practices remained stable while they changed moderately elsewhere. Access to computers dropped a bit, more than in other systems, while the use of ICT in school remained much more stable. Given the good learning outcomes of Japan in international assessments, it is possible that teachers felt less pressure than elsewhere to change their pedagogical practices.

Some trends in educational outcomes



- Academic outcome in primary and secondary science
- Academic outcome in primary and secondary maths
- Student satisfaction in secondary education
- Student enjoyment in primary and secondary science lessons
- Teachers' collective self-efficacy in primary and secondary education
- Teachers' collective ambition for their students in primary and secondary education



- Student satisfaction in primary education
- Equity of academic outcomes in primary reading
- Equity of academic outcome in primary and secondary science
- Equity of academic outcome in primary maths



- Equity of academic outcome in secondary maths

Practices that changed the most

Primary

30 less students in 100 had computers (including tablets) available during maths lessons, reaching a 48% coverage

26 more students in 100 had teachers with assistance available while conducting experiments in science, reaching a 28% coverage

22 more students in 100 had their teachers visiting another classroom to learn more about teaching, reaching a 29% coverage

Secondary

43 more students in 100 had teachers putting major emphasis on classroom tests in science, reaching a 94% coverage

26 more students in 100 had teachers with assistance available while conducting experiments in science, reaching a 28% coverage

22 more students in 100 had teachers systematically asking them to correct their own science homework, reaching a 69% coverage



The indices indicate innovation intensity from small (below 20) to large (over 40). When displayed, positive and negative values show how much of the index corresponds to an expansion and contraction of the covered practices between 2006 and 2016. Authors' calculations based on the PIRLS, PISA and TIMSS databases.

Japan

Measuring Innovation in Education 2019

What has changed in the classroom?

Measuring innovation in education and understanding its process is essential to improve the quality of the education sector. We need to examine whether, and how, practices are changing within classrooms and educational organisations and how students use learning resources. We should know much more about how teachers change their professional development practices, how schools change their ways to relate to parents, and, more generally, to what extent change and innovation are linked to better educational outcomes. This would help policy makers to better target interventions and resources, better understand where they need to get better evidence, and get quick feedback on whether reforms do change educational practices as expected. This would also enable us to better understand the role of innovation in education.

Key findings for OECD education systems

- On average, there has been a moderate level of innovation in OECD education systems, perhaps more than one would often acknowledge, but probably less than what would be needed to really improve education systems
- Many education systems have experienced high levels of technology-related innovation, with a slight decrease in access to computers and a significant increase of the use of ICT in pedagogical practices. Furthermore, on average, access to laptops increased by 17 % points between 2009 and 2015.
- In many countries, peer learning has spread as a teacher professional development practice – increasing by 40 % points for the OECD on average.
- While many policy debates have focused on “21st century skills” in the past decade, rote learning practices have spread to a similar extent as active learning practices, increasing by 28 and 26 % points respectively.
- While in some practices there have been similar patterns across education systems, in most of them there does not seem to be an international convergence on pedagogical and educational practices.
- Innovation is not an end in itself, and some changes have not always translated into improvements in educational outcomes.

Methodology

The book examines the diffusion or contraction of about 150 educational practices from 2006 to 2016 by analysing data from three international education datasets – Trends in International Mathematics and Science Study (TIMSS), Progress in International Reading Literacy Study (PIRLS), and the Programme on International Student Assessment (PISA). Beyond identifying the areas in which each education system has demonstrated emerging or changing organisational and pedagogical practices over a decade, the book synthesises education systems’ intensity of innovation by computing composite indices for countries for which enough information is available. Based on effects sizes (multiplied by 100), the education innovation indices propose a continuum, with innovation intensity being considered as relatively small when below 20, moderate between 20 and 40, and large above 40. More details on the methodology can be found in the report.

Ask questions

Stéphan Vincent-Lancrin:
Stephan.Vincent-Lancrin@oecd.org

Find the report

<https://tinyurl.com/MIE2019>

Visit our website

<https://tinyurl.com/InnovStrategy>

The **OECD Centre for Educational Research and Innovation (CERI)** provides and promotes international comparative research, innovation and key indicators, explores forward-looking and innovative approaches to education and learning, and facilitates bridges between educational research, innovation and policy development.

Explore our data on education and skills

gpseducation.oecd.org

Read our books on line

www.oecd-ilibrary.org/education/books

Buy our books online or in print

www.oecd-ilibrary.org
www.oecd.org/bookshop

Connect with us

Education and Skills Today:
oecdeducationtoday.blogspot.fr

Twitter: @OECD_Edu

Subscribe to our newsletter

www.oecd.org/edu/newsletter.htm



Japan

Measuring Innovation in Education 2019

What has changed in the classroom?

