სსიპ საგანმანათლებლო კვლევების ეროვნული ცენტრი

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GEORGIA'S EDUCATIONAL JOURNEY:

PISA 2022 INSIGHTS AND THE PATH AHEAD

PISA

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Georgia's Educational Journey: PISA 2022 Insights and the Path Ahead

Global Trends and Georgia's Experience

Long-term trends over the past five PISA cycles—from 2009 to present—reveal two significant findings about student performance worldwide and in Georgia.

Short-term perspective (2018-2022): OECD countries experienced unprecedented, universal declines in average student performance. Mathematics scores fell by 15 points and reading by 10 points—roughly equivalent to three-quarters of a school year in mathematics and half a school year in reading. Notably, over two decades of PISA testing, OECD average scores had never changed by more than four points in mathematics or five points in reading between consecutive cycles, making the 2022 results unique. This dramatic and universal decline point at the probable impact of the COVID-19 pandemic.

Contrary to the global trend, Georgia's students showed no statistically significant decline over the past two cycles, a result that distinguishes Georgia from most PISA-participating countries.

Long-term perspective (pre-2018): Global deterioration in reading and science began long before the pandemic, pointing to longer-term negative effects of certain systemic factors. While worldwide average achievement has been steadily declining since at least 2012, **Georgia's decline began later, from 2015**.

One possible explanation for Georgia's 2015-2018 decline is the country's transition from paper-based to computer-based testing in 2018—a change most other countries had implemented earlier, in 2015.

The decline in Georgia was primarily driven by increases in low-achieving students rather than decreases in high achievers, highlighting ongoing challenges in ensuring basic competencies for all students.

Student Performance: Patterns and Paradoxes

Overall Achievement Levels

Georgia's students face significant challenges across all subjects. With scores of 390 in mathematics, 374 in reading, and 384 in science, Georgia ranks in the bottom quarter of participating countries. These results reflect substantial gaps in foundational skills needed for full participation in modern society.

The results across all subjects are concerning: about two-third of students perform below basic proficiency level in mathematics, reading and science, compared to less than one-third in OECD countries. Only 1% reach high achievement levels in mathematics versus 9% in OECD nations, with similar patterns in reading and science.

Breaking Gender Stereotypes

Georgia challenges conventional gender patterns in remarkable ways. While OECD countries typically show boys outperforming girls in mathematics by 9 points, **Georgia demonstrates no significant gender gap in mathematics**—a rare achievement globally. Even more notably, high-achieving girls and boys perform at virtually identical levels.

Reading follows traditional patterns with girls outperforming boys by 35 points, consistent with global trends. In science, Georgia again defies expectations: girls outperform boys by 14 points, reversing typical stereotypes about girls and scientific achievement.

Geographic and Social Variations

Performance varies dramatically across Georgia. Urban schools consistently outperform rural ones, private schools achieve higher scores than public ones. Most significantly, students taking tests in Georgian or Russian substantially outperform those taking tests in Azerbaijani—gaps that persist even after accounting for socioeconomic differences.

These patterns suggest opportunities for improving equity in educational access and outcomes across different regions, languages, and socioeconomic backgrounds.

The Equity Paradox

Despite these disparities, Georgia presents an intriguing nuance in educational equity. Socioeconomic status has a smaller impact on achievement than in most countries—a one-unit increase correlates with only 25 additional points in mathematics compared to 39 points in OECD countries. Socioeconomic background explains just 8% of achievement variation versus 16% in OECD nations.

However, this apparent equity likely reflects Georgia's compressed performance distribution. When most students perform at low levels, socioeconomic advantages have less room to manifest—a reminder that low inequality can sometimes mask limited opportunity for everyone.

Progress Toward International Goals

Given the current performance levels, Georgia's international education commitments require careful consideration. The substantial gaps between current achievement and desired outcomes suggest the importance of developing comprehensive improvement strategies while ensuring that timelines and targets remain realistic and achievable.

Georgia has committed to ambitious Sustainable Development Goals: by 2030, 70% of students should achieve minimum proficiency in mathematics and reading. Current reality falls far short—only 34% reach this threshold in mathematics and 33% in reading.

This gap requires doubling proficiency rates within a decade, representing one of the more challenging improvement targets among PISA participants. Georgia joins many countries facing

substantial gaps between aspirations and current performance in meeting international education goals.

Educational Mindsets: Foundation for Growth

Georgian students demonstrate promising psychological foundations for learning. 57% embrace a "growth mindset"—believing intelligence develops through effort rather than being fixed—matching the OECD average and providing a key asset for improvement.

This mindset matters considerably: growth-oriented students outperform their fixed-mindset peers by 19 points initially, and 15 points after controlling for background factors. The advantage appears across different anxiety levels, with low-anxiety, growth-mindset students showing the strongest performance.

Mathematics anxiety affects Georgian students similarly to global patterns—over half worry about struggling in mathematics class, with many fearing poor grades or failure. However, students combining growth mindsets with lower anxiety demonstrate the best results, suggesting targeted interventions could yield substantial gains.

Where Learning Breaks Down

While positive mindsets provide a foundation for improvement, addressing specific skill gaps remains equally crucial for raising achievement levels. PISA data reveals the specific areas where Georgian students struggle most, providing clear guidance for improvement efforts.

Georgian students show relative strength in mathematical formulation and employing procedures (both 392 points) but struggle with interpreting results (383 points) and mathematical reasoning (384 points). This suggests students can follow algorithms but have difficulty with higher-order thinking and real-world applications.

Content-wise, students perform better with quantity (numerical reasoning, 392 points) and space and shape (spatial visualization, 389 points). The greatest challenges emerge with change and relationships (algebra, 383 points) and uncertainty and data (statistics, 384 points).

These gaps are particularly concerning given the increasing importance of statistical literacy and algebraic thinking in modern society. Georgian students show limited ability to interpret data variability, assess probability, or understand relationships between changing quantities—skills that are essential for informed citizenship and future success.

Charting the Path Forward

Georgia's PISA results point towards strategic priorities that could accelerate improvement while building on existing strengths. The evidence notably suggests that targeted interventions addressing both instructional practices and student mindsets could yield significant gains.

The growth mindset findings offer immediate opportunities for system-wide impact. Brief interventions helping students understand how intelligence develops through effort can improve achievement substantially without requiring extensive resources or retraining.

The specific skill gaps in mathematical reasoning and real-world application suggest clear directions for reform. Georgia's students can perform procedures; they need more opportunities for mathematical thinking through inquiry-based approaches that engage them in exploring patterns and connecting concepts to practical problems.

Geographic and linguistic achievement gaps demand targeted attention to ensure improvement benefits all students. Persistent disparities affecting rural students and Azerbaijani-language learners suggest these communities need additional support beyond system-wide reforms.

In sum

Georgia's COVID resilience provides optimism about the education system's capacity for improvement.

The factors enabling stability during global crisis represent assets that can be leveraged for positive change. Success will require sustained commitment to equity, evidence-based instruction, and the systemic thinking that helped Georgia navigate educational challenges while positioning the country for meaningful educational progress.