



UZBEKISTAN

Student Learning at Primary Grades in Uzbekistan: Outcomes, Challenges, and Opportunities: A summary of Uzbekistan National Learning Achievement Study, Grade IV, 2018

What factors are associated with positive primary education outcomes in Uzbekistan?

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EDITORIAL INSIGHT

Reviewers commended this piece of research for filling an obvious evidence gap in understanding quality education in Uzbekistan and for representing the first comprehensive assessment of student learning quality in the country. The research adopts a holistic, well-designed conceptual framework, drawing on international best practices for learning measurement, and develops an impressive base of tools.

Reviewers also commented that the research has a strong potential for impact on policymaking, especially thanks to the collaboration with the Ministry of Education, hence ensuring ownership of the process and its results, as well as informing ongoing educational reforms. It is also highly relevant to UNICEF's broader work in a global context of learning poverty.



Uzbekistan's new government has prompted broad political reforms with the introduction of its Development Strategy 2017–2021. These changes aim to expand economic growth, increase employment, encourage innovation, and improve skills and experience. A key focus is to improve the quality of education and learning among children and youth. This long-term economic investment will ultimately support the introduction of a more skilled and competent workforce.

While Uzbekistan has made remarkable progress in improving access to general secondary education and achieving gender parity in school enrolment, the quality of education is not well understood. To address this knowledge gap, a national learning achievement survey was conducted by UNICEF Uzbekistan in 2018. This comprehensive study provides the first insights into children's school performance at primary level, and the causes and correlations of learning and education quality in Uzbekistan. It also offers a crucial benchmark, enabling comparisons of educational performance within and beyond Uzbekistan, and lays the groundwork for optimizing children's learning outcomes.

PURPOSE

In 2010, UNICEF reported that although school enrolment rates were high in Uzbekistan, sparse data were available on quality of education and on learning outcomes. This situation has not changed over the last decade, even though education remains a priority of government social policy.

Within the context of the country's ongoing education sector reforms, there is a recognized need for evidence on children's learning to inform and support further progress. In addition, as a signatory to the United Nations Sustainable Development Goals, Uzbekistan is responsible for achieving a number of educational targets. These include Target 4.1: "By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes."

To progress towards the achievement of quality education for all children, UNICEF Uzbekistan, the Ministry of Public Education and the wider Government of Uzbekistan worked together to conduct the most comprehensive assessment of primary school student learning to date.

The four key aims of the research were to:

- assess learning levels (both in terms of content knowledge and performance by cognitive domain) among children at the end of primary school
- understand background factors that may influence learning levels
- provide a starting point to demonstrate the use of national assessments (and their analysis) to systematically track effective learning and quality improvement
- provide recommendations for policymaking to improve the quality of education.



APPROACH

A nationally representative survey

More than 7,000 children in the final year of primary education (Grade 4) took part in the research in April and May 2018. Schools and participating classes were randomly selected from across all 14 regions of Uzbekistan to provide a nationally representative sample of 268 mainstream primary schools. The average age of participants was 10 years.

This study was designed based on the quality education conceptual frameworks and international best practices of measuring learning. The assessment was modelled on existing Lithuanian national assessment tools and frameworks, which are compatible with similar assessment tools and procedures developed by the International Association for the Evaluation of Educational Achievement (IEA) and the Organisation for Economic Co-operation and Development (OECD) for their international assessment programmes. Each child was tested in three subjects: language (reading comprehension), mathematics, and general science/environmental studies. Test scores were converted to a standardized scale (with each question weighted to reflect its difficulty) to allow meaningful comparison of students' level of ability on test items of varying degrees of difficulty.

All participating children, as well as their teachers and principals, were asked to complete background questionnaires. Questions captured information on student background, home and classroom/school context, and attitudes to learning (student questionnaire). The staff questionnaire shed light on teaching methods, teacher backgrounds, pedagogical views and professional development. Mathematical modelling was used to analyse the characteristics to determine factors associated with better or worse learning outcomes.

Ethical considerations

The study was approved by an external review committee and guided by the UNICEF Procedure for Ethical Standards in Research, Evaluation, Data Collection and Analysis. Administrators from each participating school informed teachers, students and parents about the study, including the benefits and potential risks to the children. All participants were informed of their right to leave the study at any time. Data were securely stored and maintained to protect children's anonymity.

Limitations

Without clearly defined learning standards in Uzbekistan, it was impossible to compare the results with the expected levels of learning. The responses to background questionnaires also presented challenges, as there were large proportions of both unanswered questions (in some cases, up to 30 per cent of a questionnaire was left blank) and a high proportion of positive responses (which may reflect a culture of conformity). These limitations were taken into account when interpreting the research results.

KEY FINDINGS

Mixed achievements across cognitive domains

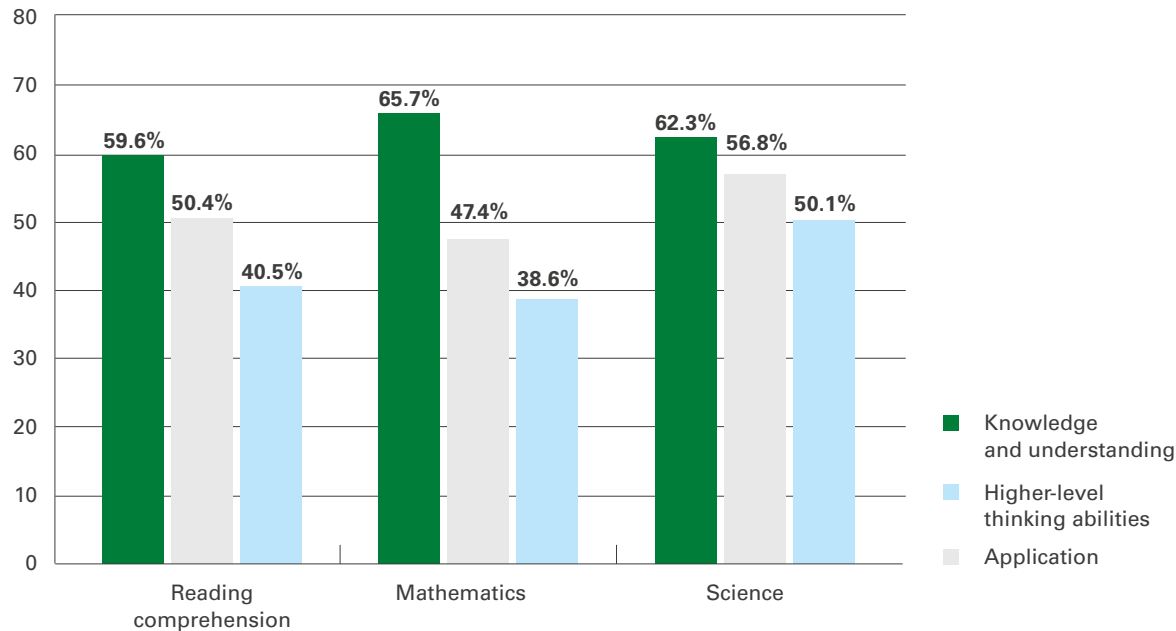
By the end of primary school, students in Uzbekistan were able to identify or recall simple and more obvious information and complete clearly set out, uncomplicated tasks. However, students struggled to identify, interpret and evaluate more complicated information, solve complex mathematical problems and respond to questions that required reasoning and application.

In the absence of robust data and analysis, evidence-based and contextualized policies and programmes to reform education sector quality and equity issues remain a challenge.

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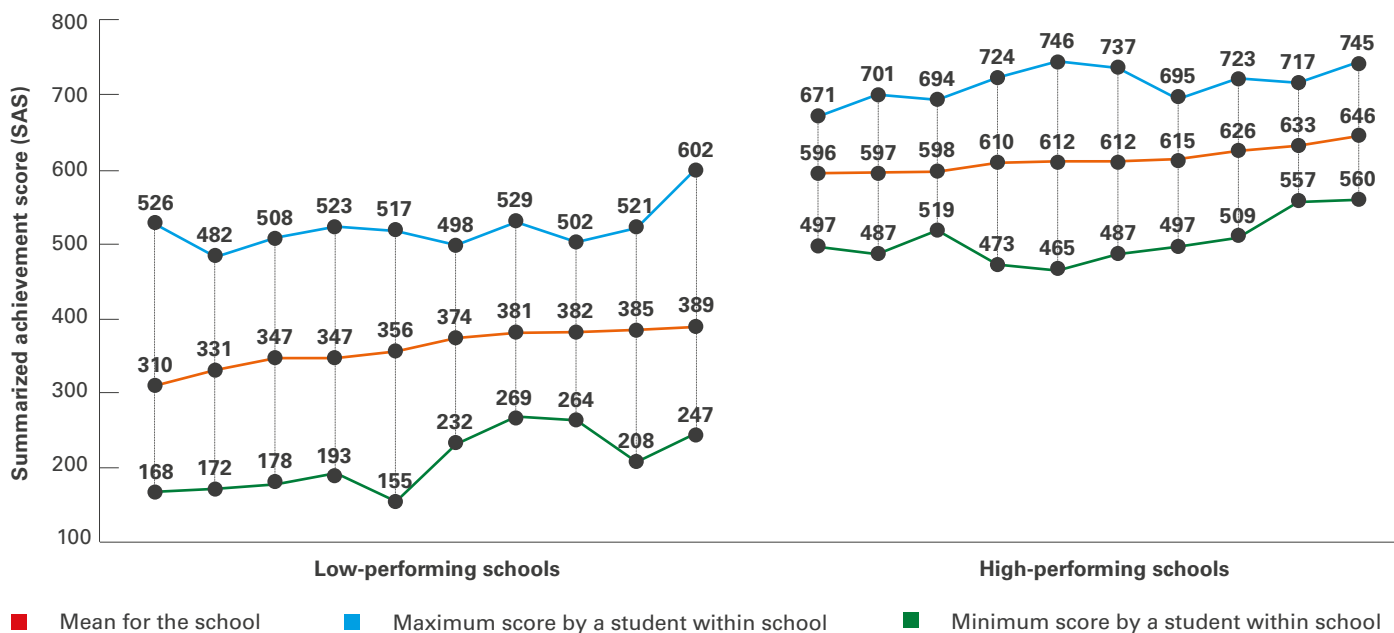
FIGURE 1
Student performance by cognitive domain



Inequalities in learning outcomes

The wide differences in the test scores of the best- and worst-performing students suggest inequalities in learning outcomes. Test scores also varied substantially between schools: in every learning area assessed, the best-performing school achieved a mean test score that was more than double that of the worst-performing school.

FIGURE 2
Student test scores by low- or high-performing schools



Gender and location associated with different learning outcomes

Girls performed better than boys in reading comprehension but similarly in mathematics and science. Children in urban areas performed better than those in rural areas in mathematics and science but not in reading comprehension.

Home environments support better learning

Children who had access to books and were immersed in a culture of reading and learning at home performed better on every test compared with children lacking access to reading aids. Having the physical infrastructure at home to enable study (e.g., a desk) also enhanced learning.

Better test scores were achieved by those students whose families had provided them with early learning and literacy experiences, for example, by reading books, telling stories and singing lullabies to them. Children who felt supported by their family, and who were either rewarded or reprimanded for their school performance, also achieved higher scores. Children who had attended a preschool before starting primary school performed better than those who had not.

Furthermore, those children who were educated in the same language as spoken at home performed much better than children whose school and home languages differed. In tests of reading comprehension, students in Uzbek-speaking schools (where 68 per cent of students spoke Uzbek at home) did much better than those in Russian-speaking schools (where only 42 per cent of students spoke Russian at home).

The school environment matters

Better learning outcomes were achieved by children who liked their school, felt good about their classes, felt safe in school and had never experienced bullying. In contrast, children attending schools where students displayed a higher level of behavioural problems – such as late arrivals, absenteeism, skipping classes or violations of school rules – tended to perform poorly.

Performance and learning were also influenced by the physical facilities of classrooms, including the ability to adjust room temperature, the suitability of desks and chairs, and the availability of learning and teaching materials. Children who were more physically comfortable in the classroom achieved better test scores.

Modern teaching methods and experience count

Children taught by teachers with previous classroom experience and a modern degree (e.g., a bachelor or master's degree) performed better in tests than those taught by a new teacher or a teacher with a Soviet-era higher education diploma or a vocational qualification.

High-performing students have home environments that support learning. The higher the support and involvement from parents/family and better the home resources, the better the student performance in test outcomes.

– Research report



INFLUENCE ON POLICY AND PROGRAMMING

As the first comprehensive national assessment of its kind in Uzbekistan, this study set a benchmark for improving the quality of education and achieving better learning outcomes. Its findings raised awareness among policymakers of the importance of using sample-based national assessments to measure education outcomes. Developed in partnership with the Ministry of Public Education, the research also ensured local ownership of research processes and results and is hoped to be used to inform ongoing education sector reforms in Uzbekistan.

The Ministry has already implemented a key recommendation around the early identification of learning gaps, by introducing Early Grade Reading and Mathematics Assessments with the support of the US Agency for International Development. The research has also informed the development of a new National Curriculum Framework for Uzbekistan and initiated a process of curriculum revisions for Grades 1 to 11.

BOX 1

KEY RECOMMENDATIONS TO IMPROVE PRIMARY EDUCATION IN UZBEKISTAN

- Reform the curriculum, the methods and practices used in teaching in primary school in Uzbekistan.
- Apply the new national learning achievement survey regularly to review education system quality.
- Reform the development of the teacher workforce.
- Expand preschool education to maximize school readiness and learning in primary school.
- Create in schools a friendly and enabling environment for learning through initiatives such as the Child Friendly Schools initiative.
- Focus on school community, including parents and families, to create greater awareness of and accountability for learning outcomes.
- Improve the resources and achievements of low-performing schools.
- Strengthen the education sector's monitoring and evaluation system through continuous and comprehensive evaluations, so that planning and programming are more evidence based.

Safe schools contribute to better learning achievements. Students attending schools where behaviour problems were reported as high, such as late arrivals, absenteeism, skipping classes or violations of school rules, tend to do worse in tests.

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LOOKING AHEAD

The new national learning achievement survey created by this research represents a key baseline dataset that can help to identify strengths and weaknesses of the education system. It will be used to highlight any gaps and challenges for policies and decision-making; to explore and optimize existing resources; and as a baseline for measuring future changes to educational standards. Use of the survey will also enable Uzbekistan to participate in several international projects, including the forthcoming Programme for International Student Assessment (PISA) in 2021.

More broadly, the findings are expected to trigger policy debates among education stakeholders, such as government, development partners, parents, teachers and civil society organizations, about the quality of education in Uzbekistan and what really contributes to better learning, both inside and outside of school. Ultimately, the research results will be used to guide and design new strategies to focus on those interventions that can most effectively improve the quality of education, in an equitable manner.



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Students in the Fergana region, Uzbekistan perform a science experiment using a microscope.



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