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How Are Competent Learners Developed? The Multidimensional Approach Of Pisa 2025, Uzbekistan's Results And Education Reforms

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Abstract: This article examines Chapter 1 of the OECD report PISA 2025 Results (Volume I): Future-Ready Students. It discusses a multidimensional approach to student learning that goes beyond test scores and explains the three concentric dimensions of the framework: the competent learner, a safe and fair learning environment, and supportive families and schools. Competence is considered in terms of both proficiency and engagement, which do not necessarily develop together: across OECD countries, only 14% of students meet the criteria for both. The article also addresses education spending, the global pool of prospective science innovators, divergent performance trends, perceptions of social mobility and environmental agency. Particular attention is paid to Uzbekistan's inclusion among the three leading education systems on six indicators, its improvement in science performance and positive changes in school climate and resources, drawing on other chapters of the report and the OECD country note. These findings are discussed in relation to national education reforms and the relevant legal framework, without assuming a direct causal relationship. The article concludes with practical implications for schools.

Keywords: PISA 2025, competent learner, proficiency, student engagement, curiosity, perseverance, social mobility, growth mindset, academic resilience, education spending, education reform, Uzbekistan.

Introduction

Discussions of international assessment results often focus on a single number: the average score. This is understandable, since scores are concise, precise and easy to compare. Nevertheless, a test score cannot provide a complete picture of a learner.

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Consider two students. The first earns a high test score but has little interest in school, gives up quickly when faced with difficulties and hesitates to ask for help. The second achieves an average score but is curious and persistent, sets goals and seeks help when needed. Which student is better prepared for the future? A test score alone cannot answer this question.

Chapter 1 of the OECD report PISA 2025 Results (Volume I): Future-Ready Students addresses precisely this issue. It examines learning through multiple dimensions rather than one and explores how these dimensions are related [13]. This issue is particularly relevant to Uzbekistan, which has consistently pursued the assessment of education quality against international benchmarks in recent years. A legal foundation was established by Resolution No. 997 of the Cabinet of Ministers of 8 December 2018, “On Measures to Organise International Studies on Education Quality Assessment in the Public Education System”. The resolution provided for participation in PIRLS, TIMSS, PISA and TALIS and the establishment of a national centre responsible for their implementation [11]. The Concept for the Development of the Public Education System until 2030, approved by Presidential Decree No. PF-5712 of 29 April 2019, identified continued participation in international assessments, competency-based standards, the development of critical thinking and improved standing in the PISA international ranking by 2030 as strategic objectives [2]. The Law “On Education” further established education quality monitoring and the assessment of learners’ knowledge, skills and competencies among the responsibilities of authorised bodies [1, Articles 26 and 42].

Building on this foundation, Uzbekistan participated for the first time in four major international studies within a relatively short period: PIRLS 2021 [19], PISA 2022 [21], TIMSS 2023 [20] and TALIS 2024 [22]. This sustained participation forms part of broader reforms aimed at informing educational decision-making through objective and internationally comparable evidence.

PISA 2025 marked Uzbekistan’s second participation in PISA. A total of 8,652 students from 233 schools took part, representing approximately 558,000 students aged 15, or an estimated 90% of the population in that age group [14]. The assessment covered 91 countries and economies, and the results were released on 8 September 2026 [13].

This article aims to present the main ideas of Chapter 1 in accessible language, interpret its key figures and provide a focused analysis of findings concerning Uzbekistan. The discussion is based primarily on that chapter and, where

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necessary, draws on other chapters and the OECD country note for Uzbekistan. National findings are considered alongside education reforms and relevant legal acts.

1. A Multidimensional Approach: The Three-Ring Model

1.1. Why one score is not enough

Learning is not solely a cognitive process. The report describes it as a dynamic process shaped by cognitive, emotional, social and physical dimensions, all of which continually interact with the learner's environment [13]. Students' emotional state, classroom conditions and family circumstances can influence educational outcomes alongside academic knowledge.

This perspective has intellectual foundations in the OECD's Definition and Selection of Competencies (DeSeCo) framework, which regards competence as a multifaceted concept combining cognitive, social-emotional and practical resources [17].

1.2. Three concentric rings

PISA 2025 presents this approach through a simple diagram consisting of three concentric rings [13]:

- • At the centre is the competent learner, the central objective of the framework.
- • The middle ring represents a safe and fair learning environment. It includes a sense of belonging at school, disciplinary climate, freedom from bullying, regular attendance and fairness in educational opportunities.
- • The outer ring represents supportive families and schools, including parental involvement, teacher support, adequate staffing and resources, and readiness for digital learning.

The underlying principle is straightforward: the desired outcomes at the centre cannot be achieved by focusing on the learner alone. Even a well-designed curriculum may fall short of its potential if students do not feel safe, classroom conditions are disruptive or support at home is limited.

1.3. Who is a competent learner?

The report conceptualises the competent learner through the combination of two dimensions [13]:

The first is proficiency. PISA 2025 assesses it in four areas: science, reading, mathematics and computational problem solving.

The second is student engagement. It includes seven indicators: curiosity and perseverance (motivation); goal-setting and help-seeking (self-regulation); and

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a growth mindset, epistemic beliefs about science and cognitive flexibility (learning-related attitudes).

A competent learner reaches the specified thresholds in both dimensions. In other words, competence involves not only knowing but also being willing and able to continue learning.

1.4. What do the two outer rings contain?

The framework is more than a conceptual diagram. Each ring comprises measurable indicators [13], with their definitions and measurement procedures specified in the assessment framework [15].

The second ring, a safe and fair learning environment, includes seven indicators:

- • students' sense of belonging at school;
- • the perceived value of learning at school, including whether students believe school prepares them for adult life;
- • disciplinary climate in lessons;
- • absence of bullying;
- • absence of truancy;
- • academic resilience;
- • students' beliefs about social mobility.

The first five indicators describe students' everyday school experience, while the last two concern fairness within the education system. In this context, fairness means that students' socio-economic backgrounds should not predetermine their future opportunities.

The third ring, supportive families and schools, comprises two groups of indicators. Human support includes family support, teacher support, the availability of teaching staff and peer-to-peer tutoring. The digital environment includes schools' readiness for digital learning, school rules concerning mobile phones, guidance on digital device use and opportunities to learn how to evaluate AI-generated information in class.

This set of indicators is significant: the report treats the digital environment not as a separate issue but as an integral part of the support that schools provide.

2. Proficiency and Engagement Do Not Necessarily Coincide

2.1. The leading systems differ

One of the important findings of this chapter is that education systems leading in proficiency are not necessarily those leading in student engagement [13].

Across all four proficiency areas, the same three systems feature prominently: B-S-J-Z (China), Macao (China) and Singapore.

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The pattern for engagement differs markedly. The leading systems for curiosity include Brunei Darussalam, Costa Rica and Mauritius; for perseverance, Costa Rica, Malaysia and Thailand; for goal-setting, the United Arab Emirates, Kenya and Saudi Arabia; and for a growth mindset, Austria, Estonia and France.

Thus, different countries and economies stand out on different measures.

2.2. Only 14%

What happens when proficiency and engagement are considered together? On average across OECD countries, only 14% of students meet the criteria in both dimensions [13].

The highest proportions are reported for B-S-J-Z (China), at 33%, and Singapore, at 28%. Both education systems have high proportions of proficient students, but even in these strong-performing systems, only a minority simultaneously demonstrate the broader profile of engagement.

The reverse pattern also occurs. In Kenya, Kosovo and Morocco, the proportion of proficient students is below 10%, while more than one-third (35–38%) show engagement without reaching the proficiency criterion. These findings illustrate that willingness to learn does not necessarily translate immediately into measured proficiency.

2.3. Implications

The report draws a clear distinction: engagement should not be regarded merely as a by-product of academic success, nor should test scores be used as a proxy for engagement [13]. Both dimensions warrant direct attention.

For schools, this means that a high score should not automatically be taken to indicate that all is well. Students who perform strongly but lack enjoyment or motivation in learning may also benefit from targeted support.

A methodological note is essential. Engagement indicators rely on student self-reports, and the methods used to construct the indices are described in the technical documentation [16]. Response styles and cultural norms may differ between countries, so international comparisons should be interpreted with caution [13]. These indicators reflect students' perceptions rather than purely objective measurements.

3. Education Spending: Where It Matters and Where It Does Not

Does national wealth determine educational outcomes? To some extent. Approximately half of the variation in countries' average scores is associated with GDP per capita, but among OECD countries alone the association explains

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only 9% of the variation [13]. The explanatory power of income therefore diminishes at higher levels of national prosperity.

A clearer pattern emerges when actual education expenditure is considered. The report compares cumulative spending per student from ages 6 to 15, adjusted for purchasing power parity (PPP), with performance in science. Higher spending is associated with higher scores up to approximately USD 85,000 per student. Beyond that level, the association becomes much weaker [13].

Two practical implications follow:

1. Education must be adequately funded, a requirement that the report considers particularly important for developing countries.
2. Beyond a certain point, the key question shifts from “How much is spent?” to “How effectively are resources used?”

For engagement, no consistent association with expenditure is observed: spending is not consistently related to curiosity, while the relationship with perseverance is weakly negative [13]. Financial resources alone, therefore, cannot guarantee that students become curious and motivated. Strong engagement may also develop in education systems with more limited expenditure, highlighting the importance of effective educational practices.

4. Declining Results, but Not Uniformly

Across OECD countries, the longer-term picture is challenging: PISA 2025 recorded historically low performance across the assessed core subjects, with the exception of science in PISA 2022 [13].

More important than the overall decline is its distribution. The report examines the lower (25th percentile) and upper (75th percentile) parts of the performance distribution. The following table shows changes between 2015 and 2025 in the OECD average [13]:

Subject	**Lower-performing students (25th percentile)**	**Higher-performing students (75th percentile)**
Science	−15 points	−8 points
Reading	−38 points	−27 points
Mathematics	−32 points	−23 points

In all three subjects, the decline was greater among students at the lower end of the performance distribution. The report notes that approximately 20 score points can serve as a rough reference for one year of learning, although this relationship varies across systems [13]. Using this reference, the decline among

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lower-performing students in reading is equivalent to almost two years of learning.

A related pattern is visible in engagement. Between 2022 and 2025, responses to selected curiosity and perseverance items deteriorated in many systems, although the underlying indices cannot be compared directly across cycles. One exception was an increase, in 59 countries, in the share of students who considered themselves more curious than their peers [13].

These trends are connected: education systems experiencing larger declines in reported curiosity also tended to record larger declines in reading performance [13]. This does not contradict the findings in Section 2. Proficiency and engagement are distinct at a given point in time, even though changes in them may move in a similar direction over time.

Importantly, a decline is not inevitable. Several education systems have improved their science results since 2022, including Uzbekistan among non-OECD participants [13, Executive Summary]. This positive trend is examined in Section 8.2.

5. Future Scientists: A Global Talent Pool

The chapter presents an estimate of the global pool of high-performing students. Across the 91 systems participating in PISA 2025, approximately 1.9 million students reached Level 5 or 6 in science [13]. The report cautions that some participants did not meet one or more PISA sampling standards; accordingly, the figures should be interpreted with the qualifications provided in the Reader's Guide [13].

How many of these students expect to pursue a science-related career? Among high performers who expect to work in science, technology, engineering or mathematics (STEM) by age 30, the estimated figure is 1.02 million. Thus, about 55% of high performers in science anticipate entering a STEM occupation [13].

A country's contribution to the global talent pool depends on population size as well as performance. For example, the United States contributes approximately one-quarter of the estimated global pool because of its large student population, despite a relatively modest proportion of top performers. Singapore has one of the world's highest shares of top performers, but its smaller population means that its contribution to the global total is below 1% [13].

This perspective is relevant to Uzbekistan. With a large young population, the country has considerable demographic potential to expand its pool of future researchers and innovators. Uzbekistan's inclusion among systems where the

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proportion of low performers in science fell and the proportion of high performers rose between 2022 and 2025 (see Section 8.2) is an encouraging sign of progress [13].

National measures to identify and support talented young people at an early stage also contribute to this objective. Presidential Decree No. PF-86 of 15 May 2025 envisaged the establishment of the Al-Beruniy International Boarding School from the 2025/2026 academic year under the "President's Gifted Children" initiative. Under the "Yorqin iste'dod" programme, up to 1,500 Grade 9 graduates with the potential to study at foreign higher education institutions are to be selected annually. The decree also provides for 200 annual places from 2027 with financial support for studies abroad [7].

6. Do Students Believe in Their Future?

PISA 2025 introduced an item asking students whether they agreed with the statement, "Your status in society is something that you can't really change very much." Disagreement with this statement is interpreted as a belief in social mobility [13].

The findings are as follows:

- • Approximately two in three students across OECD countries disagreed with the statement and thus believed that their social position could change. This proportion was below 40% in Thailand, the Philippines and Indonesia, but around 75% in Portugal and Israel. The report also indicates that students tend to perceive more mobility in societies with higher levels of actual mobility, as reflected in the Global Social Mobility Index [13; 18].
- • Students from socio-economically disadvantaged backgrounds were 12 percentage points less likely to believe in social mobility.

An important relationship emerges between three concepts [13]:

Belief in social mobility, a growth mindset and academic resilience. The report presents these as mutually associated characteristics.

Students with a growth mindset were approximately three times as likely to believe in social mobility as those with a fixed mindset. Nearly four in five academically resilient students—those achieving high results despite socio-economic disadvantage—had a growth mindset, compared with roughly three in five disadvantaged students who were not among the higher performers.

The educational implication is that students' belief in their capacity to develop is not merely a personal feeling: it is a measurable factor associated with

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educational outcomes. The report explicitly cautions, however, that these associations do not establish causation [13].

Uzbekistan's figures for academic resilience are encouraging. In PISA 2025, 22% of its socio-economically disadvantaged students scored in the top national quarter for science, compared with an OECD average of 12% [13; 14]. In addition, socio-economic status accounted for only 1% of variation in science performance in Uzbekistan, compared with 12% on average across OECD countries [14]. These figures provide positive evidence concerning equity, a central feature of the model's second ring.

7. Environmental Readiness: A New Dimension of the Model

One innovation in PISA 2025 is its explicit consideration of students' readiness to address environmental challenges. Chapter 1 describes this in terms of environmental agency, using four indicators. The first three are central components of agency, while the fourth concerns opportunities to learn at school [13]:

1. Environmental knowledge and skills, measured through students' proficiency in environmental science.
2. Environmental attitudes, encompassing environmental awareness, confidence in one's ability to make a difference and belief in the effectiveness of collective action.
3. Commitment to environmental protection, including participation in environmental activities and interest in contributing through a future career.
4. School-based learning opportunities, measured by how frequently students can study environmental issues in lessons.

These dimensions are related. Students who report more opportunities to learn about environmental issues in class also tend to demonstrate better outcomes, more positive attitudes and stronger commitment [13].

The report also identifies a gap between concern and action: some students care about the environment but do not report a comparable commitment to protecting it. Such students tend to have fewer opportunities to engage with environmental education in school [13].

The implication for teaching is that environmental education should go beyond developing awareness and offer clear opportunities for action. Practical classroom tasks can help translate positive attitudes into meaningful engagement.

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Students in Uzbekistan reported positive environmental attitudes and commitment: 83% believed that their actions could make a positive difference to the environment (OECD average: 81%), and 78% were interested in contributing to environmental protection through their future careers (OECD average: 62%) [14].

8. Uzbekistan's Results: Achievements and Their Alignment with Education Reforms

8.1. Among the three leading systems on six indicators

Figure I.1.2 in Chapter 1 identifies three leading education systems for each indicator; the order within each group does not indicate a ranking. Uzbekistan appears in these groups on six occasions [13]:

Indicator	**Three leading education systems**
Disciplinary climate	Korea, Japan, Uzbekistan
Absence of bullying	Armenia, Kazakhstan, Uzbekistan
School readiness for digital learning	United Arab Emirates, Singapore, Uzbekistan
No shortage of teaching staff	Bulgaria, Georgia, Uzbekistan
Peer-to-peer tutoring	Philippines, Thailand, Uzbekistan
Learning to assess AI-generated content in class	United Arab Emirates, Singapore, Uzbekistan

This is a notable finding. Uzbekistan appears alongside Korea and Japan for disciplinary climate and alongside Armenia and Kazakhstan for the absence of bullying. Both indicators belong to the safe and fair learning environment dimension and are positively associated with proficiency and engagement in the overall framework [13].

The six indicators draw on two types of source: disciplinary climate, absence of bullying and learning to assess AI-generated content are based on student questionnaires, while school readiness for digital learning, absence of teaching staff shortages and peer-to-peer tutoring are based on principals' questionnaires [13]. Positive findings thus emerge from the perspectives of both students and school leaders.

8.2. Positive trends in science performance

Other chapters of the report document another important achievement for Uzbekistan. Published PISA 2025 findings for the country cover science,

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computational problem solving within "learning in the digital world", and questionnaire indicators [13; 14]. Uzbekistan's mean score in science, the main PISA 2025 domain, was 438 points [13, Table I.2.1], compared with 355 points in PISA 2022 [21, Table I.2.3]. This represents an improvement of 83 points over three years. The OECD explicitly identifies Uzbekistan among non-OECD education systems whose science performance improved after 2022 [13]. Against the broader international trend described in Section 4, this improvement is particularly noteworthy.

The improvement was also evident across the performance distribution. Between 2022 and 2025, the share of lower-performing students in science decreased while the share of higher-performing students increased. In this respect, Uzbekistan is cited alongside Jordan, Montenegro, Saudi Arabia, Türkiye, the United Arab Emirates and the United Kingdom [13, Table I.2.8]. Girls' mean science performance increased by more than 85 points, one of the largest improvements highlighted in the report, while the share of lower-performing boys fell by more than 42 percentage points [13].

The findings are positive from an equity perspective as well. Science scores among socio-economically disadvantaged students rose by more than 40 points between 2022 and 2025 [13, Table I.2.10]. The difference in science performance between the most and least advantaged national quarters was 22 points, compared with an OECD average of 85 points [14].

8.3. Improvements in school climate and resources

The six indicators from Chapter 1 are complemented by evidence in the OECD country note and Chapter 4. In Uzbekistan, 10% of students reported experiencing at least one form of bullying several times a month or more, compared with 20% on average across OECD countries. This figure remained broadly stable between 2022 and 2025, while bullying became more prevalent in many participating systems [14]. Uzbekistan was also among the systems reporting some of the strongest improvements in students' feelings of safety at school and on the way to school [13, Chapter 4]. In addition, 87% of students reported that science teachers were interested in every student's learning, and 88% said teachers continued to explain until students understood, compared with OECD averages of 69% and 66%, respectively [14].

School resource indicators also improved. The proportion of students in schools whose principals reported that a shortage of teaching staff hindered instruction declined from 24% in 2022 to 8% in 2025 (OECD average: 39%). The

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corresponding proportions for shortages of educational materials fell from 54% to 18%, and for shortages of physical infrastructure from 45% to 19% [14].

Student attitudes to learning also offer encouraging evidence. In Uzbekistan, 78% of students described themselves as curious, 68% reported perseverance when facing difficult work, and 57% said they planned their approach to studying. The corresponding OECD averages were 73%, 60% and 37%. The proportion viewing time spent at school as a waste declined by 13.8 percentage points compared with 2022 [14].

8.4. The legal framework for reform and its alignment with the findings

An important qualification must be kept in mind when interpreting these findings. PISA results reflect students' cumulative educational experiences up to the age of 15 rather than the effects of any single policy [13]. The following discussion therefore considers alignment between policy priorities and observed outcomes, not a proven causal relationship. In that sense, the achievements documented by PISA 2025 are consistent with priorities established in legal acts adopted between 2018 and 2023, while subsequent acts issued in 2025–2026 provide for further development.

First, curriculum and assessment reform. The National Programme for School Education Development for 2022–2026, approved by Presidential Decree No. PF-134 of 11 May 2022, prioritised the full implementation of a national curriculum developed with reference to international experience, alongside competency-based teaching methods focused on practical skills [4]. Presidential Decree No. PF-79 of 26 May 2023 envisaged the introduction, from the 2023/2024 academic year, of a new assessment system addressing the application of knowledge, critical thinking and analysis, as well as an increase in the share of practical learning activities to 60%. Its roadmap also called for improvement of the requirements for "Modern Schools" based on international assessment criteria [5]. These directions correspond to PISA's emphasis on applying knowledge in real-world contexts and align with the positive trend observed in science performance.

Second, strengthening the professional capacity and status of teachers. Decree No. PF-134 introduced salary supplements for teachers holding international or national professional certificates, while Decree No. PF-79 addressed supplements for holders of international certificates [4; 5]. Further measures included Cabinet of Ministers Resolution No. 130 of 28 February 2025, which improved teacher appraisal, professional certification and incentive

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arrangements [12], and Presidential Decree No. PF-73 of 28 April 2025, which established the National Pedagogical University and provided for STEAM laboratories in teacher education institutions [6]. The revised "Uzbekistan–2030" Strategy, adopted through Presidential Decree No. PF-21 of 16 February 2026, sets targets to double teachers' salaries by 2030 relative to the 2023 level and increase the proportion of teachers with higher education qualifications in schools to 99% [9]. These measures are consistent with the favourable PISA 2025 findings on the availability of teaching staff and the decline in reported staffing constraints.

Third, improving educational resources and the digital environment. Presidential Decree No. PF-60 on the Development Strategy of New Uzbekistan for 2022–2026 envisaged allocating UZS 605 billion from the state budget to renew textbooks in general secondary schools [3]. The updated "Uzbekistan–2030" Strategy envisages increasing the number of titles in new-generation textbook sets from 617 in 2025 to 1,000 by 2030, expanding multimedia applications for tablets from 200 to 1,000, and equipping all schools with electronic boards [9]. These priorities are aligned with Uzbekistan's strong position in school readiness for digital learning and the marked reduction in perceived shortages of educational materials in PISA 2025.

Fourth, strengthening the foundations and governance of education. Presidential Decree No. PF-19 of 5 February 2026 provides for a one-year school-readiness programme to be incorporated as the initial stage of compulsory general secondary education [8]. Coverage by school-readiness groups reached 98% in 2025, with a target of 100% by 2030 [9]. Presidential Decree No. PF-213 of 3 October 2026 established a single Ministry of Education and Science by reorganising the Ministry of Preschool and School Education and the Ministry of Higher Education, Science and Innovation. The new ministry is the legal successor to both, including with respect to their obligations and international agreements [10].

Taken together, Uzbekistan's achievements in PISA 2025—including a safer and more orderly learning environment, favourable staffing and resource trends, digital readiness and improved science performance—are consistent with the priorities of its ongoing education reforms. In the logic of the three-ring model, strengths in the outer dimensions can help sustain the development of competent learners at the centre.

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9. Conclusions and Practical Recommendations

The analysis of Chapter 1 of the PISA 2025 report and the findings concerning Uzbekistan supports the following conclusions.

First, test scores alone do not provide a comprehensive account of student learning. They should be considered alongside curiosity, perseverance and self-regulation.

Second, proficiency and engagement do not necessarily develop together. Only 14% of students across OECD countries meet both criteria. Schools should therefore address both dimensions explicitly.

Third, financial resources are necessary but not sufficient. Beyond a certain threshold, the effective allocation and use of resources becomes especially important.

Fourth, performance declines across OECD countries have been more pronounced among lower-performing students, underlining the importance of monitoring inequalities within achievement distributions.

Fifth, students' confidence in their future opportunities is a measurable factor associated with educational outcomes.

Sixth, Uzbekistan features among the three leading education systems on six indicators related to the outer rings of the framework: disciplinary climate, absence of bullying, digital readiness of schools, availability of teaching staff, peer-to-peer tutoring and learning to assess AI-generated content in class. Its science performance has also improved substantially since 2022. These achievements are aligned with the priorities of national education reforms.

Five practical priorities follow for schools.

1. Deliberately develop curiosity in the classroom. Curiosity and perseverance can be strengthened through teaching and learning experiences. Explaining the relevance of a topic and connecting it to everyday life can support engagement. A simple reflective question at the end of a lesson—"Where might we use what we learned today?"—can help teachers observe students' understanding of its purpose.

2. Monitor the progress of students across the achievement distribution. Average scores can conceal differences between groups. In OECD countries, declines were often more substantial among lower-performing students (Section 4). School monitoring should therefore track progress at different levels rather than rely solely on the average. Uzbekistan's experience (Section 8.2)

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illustrates that distribution-sensitive analysis can also reveal positive changes, such as a reduction in the proportion of lower-performing students in science.

3. Strengthen students' confidence in their ability to learn. A growth mindset—the belief that abilities can develop through effort and practice—is associated with beliefs about social mobility and academic resilience. Teachers can encourage this outlook by recognising progress, providing actionable feedback and treating errors as opportunities for learning.

4. Connect environmental education to practical tasks. The report links gaps between concern and action to limited opportunities for learning about environmental issues. Lessons should therefore provide concrete opportunities for students to apply their knowledge through manageable activities.

5. Consolidate the achievements already made. The positive findings in Section 8 provide a foundation for further progress. Because the outer rings are intended to support the learner at the centre, schools can build on these strengths to foster both proficiency and engagement in everyday teaching. This direction is consistent with the goals of the Concept for the Development of the Public Education System until 2030 [2] and the updated "Uzbekistan–2030" Strategy [9].

Future research could undertake more detailed comparative analyses of data concerning Uzbekistan in Chapters 2–5 of the report, investigate the six highlighted indicators using complementary national evidence, and examine PISA findings alongside those of the other international assessments in which Uzbekistan participates, including PIRLS, TIMSS and TALIS.

References:

I. Laws and Regulatory Acts

1. Republic of Uzbekistan. Law No. O'RQ-637 of 23 September 2020, "On Education". National Database of Legislation. https://lex.uz/docs/5013007

2. President of the Republic of Uzbekistan. Decree No. PF-5712 of 29 April 2019, "On Approval of the Concept for the Development of the Public Education System of the Republic of Uzbekistan until 2030". National Database of Legislation. https://lex.uz/docs/-4312785

3. President of the Republic of Uzbekistan. Decree No. PF-60 of 28 January 2022, "On the Development Strategy of New Uzbekistan for 2022–2026". National Database of Legislation. https://lex.uz/docs/-5841063

Licensed under CC Attribution-NonCommercial 4.0

4. President of the Republic of Uzbekistan. Decree No. PF-134 of 11 May 2022, "On Approval of the National Programme for the Development of School Education for 2022–2026". National Database of Legislation. https://lex.uz/docs/-6008663
5. President of the Republic of Uzbekistan. Decree No. PF-79 of 26 May 2023, "On Measures to Organise Effectively the Activities of the Ministry of Preschool and School Education and Its Subordinate Organisations". National Database of Legislation. https://lex.uz/docs/-6476175
6. President of the Republic of Uzbekistan. Decree No. PF-73 of 28 April 2025, "On Measures to Further Improve the System of Teacher Education". National Database of Legislation. https://lex.uz/docs/-7499721
7. President of the Republic of Uzbekistan. Decree No. PF-86 of 15 May 2025, "On Measures to Implement the 'President's Gifted Children' Initiative". National Database of Legislation. https://lex.uz/docs/-7533151
8. President of the Republic of Uzbekistan. Decree No. PF-19 of 5 February 2026, "On Measures to Further Improve the System of Preschool Education and Upbringing". National Database of Legislation. https://lex.uz/docs/-8037353
9. President of the Republic of Uzbekistan. Decree No. PF-21 of 16 February 2026, "On Additional Measures to Continue Reforms Consistently and Advance Them to a New Stage within the Country's Development Priorities through 2030". National Database of Legislation. https://lex.uz/docs/-8050769
10. President of the Republic of Uzbekistan. Decree No. PF-213 of 3 October 2026, "On the Establishment of the Ministry of Education and Science of the Republic of Uzbekistan". National Database of Legislation. https://lex.uz/docs/-8519155
11. Cabinet of Ministers of the Republic of Uzbekistan. Resolution No. 997 of 8 December 2018, "On Measures to Organise International Studies on Education Quality Assessment in the Public Education System". National Database of Legislation. https://lex.uz/docs/-4097073
12. Cabinet of Ministers of the Republic of Uzbekistan. Resolution No. 130 of 28 February 2025, "On Amendments and Additions to Certain Government Resolutions Aimed at Improving the Systems for Teacher Appraisal, Professional Certification and Incentives". National Database of Legislation. https://lex.uz/docs/-7409825

II. Reports of International Organisations and Academic Literature

Licensed under CC Attribution-NonCommercial 4.0

13. OECD. (2026). PISA 2025 Results (Volume I): Future-Ready Students. OECD Publishing, Paris. https://doi.org/10.1787/73451bc5-en
14. OECD. (2026). PISA 2025 Results (Volume I): Country Notes—Uzbekistan. OECD Publishing, Paris. https://www.oecd.org/en/publications/pisa-2025-results-volume-i-country-notes_2d4ff9ea-en/uzbekistan_f977081e-en.html
15. OECD. (2026). PISA 2025 Assessment and Analytical Framework. OECD Publishing, Paris. https://doi.org/10.1787/86c36975-en
16. OECD. PISA 2025 Technical Report (draft). OECD Publishing, Paris. https://www.oecd.org/content/dam/oecd/en/about/programmes/edu/pisa/publications/technical-report/PISA%202025%20Technical%20Report.zip
17. Rychen, D. S., & Salganik, L. H. (Eds.). (2003). Key Competencies for a Successful Life and a Well-Functioning Society. Hogrefe & Huber, Cambridge, MA/Göttingen.
18. World Economic Forum. (2020). The Global Social Mobility Report 2020. Cologny/Geneva.
https://www3.weforum.org/docs/Global_Social_Mobility_Report.pdf
19. Ismailov, A., Palvannazirov, S., Karimberdiev, K., & Kholmirzaev, F. (2022). Uzbekistan. In PIRLS 2021 Encyclopedia. TIMSS & PIRLS International Study Center, Boston College; IEA. https://pirls2021.org/wp-content/uploads/2022/11/Uzbekistan.pdf
20. Ismailov, A., Palvannazirov, S., Karimberdiev, K., & Kholmirzaev, F. (2024). Uzbekistan. In TIMSS 2023 Encyclopedia. TIMSS & PIRLS International Study Center, Boston College; IEA. https://timss2023.org/wp-content/uploads/2024/10/Uzbekistan.pdf
21. OECD. (2023). PISA 2022 Results (Volume I): The State of Learning and Equity in Education. OECD Publishing, Paris. https://doi.org/10.1787/53f23881-en

III. Online Resources

22. International Assessment Programmes. Raqamli Ta'lim Portal (raqamlitalim.trm.uz). https://raqamlitalim.trm.uz/en/xbd

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