RESEARCH ARTICLE

Model for Preparing Future Teachers Based on Contemporary Trends: An Analysis Grounded in Talis-2024 Results

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Abstract

This article examines the findings of the TALIS 2024 survey in the context of Uzbekistan's lower secondary education system, providing a comprehensive analysis of teacher demographics, professional practices, development, wellbeing, and satisfaction. The study highlights that Uzbek teachers are relatively young, with a higher proportion of early-career professionals compared to OECD averages, emphasizing the need for effective mentoring and professional development programs. Gender composition indicates a gradual increase in male participation, suggesting a slow restoration of gender balance in the teaching profession. The survey reveals strong collaboration among teachers, positive relationships with students, parents, and school principals, and active engagement in professional development. The use of artificial intelligence and digital technologies is higher than the OECD average, reflecting openness to pedagogical innovation. Mentoring and induction systems are well-established, supporting novice teachers and enhancing teaching quality.

KEYWORDS

TALIS 2024, Uzbekistan, lower secondary education, teacher demographics, professional development, mentoring, artificial intelligence in education, teacher collaboration, job satisfaction, teaching quality, educational policy.

INTRODUCTION

In the contemporary education system, enhancing teachers' professional practice is regarded as one of the key factors in improving the quality of education. A teacher is not only a provider of knowledge but also a central pedagogical agent who significantly influences students' cognitive, social, and emotional development. Therefore, the continuous development of teachers' professional competence, their scientific and methodological support, and the modernization of their activities in line with current demands constitute a strategic priority of educational policy. For this reason, in order to systematically analyze these factors, conduct comparative studies of teachers' professional activities, and provide an evidence-based foundation for education policy, the OECD implements TALIS — the Teaching and Learning International Survey.

TALIS (Teaching and Learning International Survey) is a comprehensive set of international studies focused on teaching and learning, targeting the teaching workforce within school education systems. Conducted under the auspices of the OECD (Organisation for Economic Co-operation and Development), TALIS represents a large-scale and highly reputable international comparative study examining school learning environments, professional working conditions, and pathways for developing teachers to the level of professionally

competent and highly skilled educators. TALIS is widely recognized as one of the largest and most authoritative international surveys dedicated to the analysis of teachers' working conditions and the learning environments within schools.

The primary objective of the study is to support participating countries in identifying and developing mechanisms that ensure the most effective teaching and learning processes in secondary education institutions. In addition, TALIS collects and comparatively analyzes data on teachers and school principals across different countries in order to enhance professional development systems and improve the conditions necessary for effective teaching and school leadership. Within the TALIS framework, empirical data are gathered on teachers' instructional practices, assessment methods, classroom management strategies, competencies in the use of digital technologies, needs for professional development, as well as leadership and management practices in educational institutions. The findings of the study serve as an evidence base for improving education policies and for making scientifically grounded decisions aimed at supporting teachers' professional work and development.

METHODS AND RESULTS

The significance of TALIS lies in its ability to provide an in-depth analysis of numerous factors related to teachers' professional activities that are typically not reflected in local statistical data, yet have a direct impact on the quality of education. These factors include real pedagogical situations arising in the classroom, teachers' workload and levels of occupational stress, the social and psychological climate within schools, and the extent to which pedagogical innovations are implemented in educational practice. From this perspective, TALIS enables the identification of global trends in the development of education systems and offers opportunities to enrich national education policies through the incorporation of international experience and evidence-based insights.

The benefits of participation in the TALIS study for participating countries can be illustrated through the following example. Montserrat Gomendio, former Secretary of State for Education, Vocational Training and Universities of Spain and former Chair of the TALIS Governing Board of participating countries, expressed her views on the TALIS study as follows: *"Spain's participation in TALIS 2008 and TALIS 2013 provided us with an opportunity to reflect on our approaches to teaching and the challenges facing education. The results of the TALIS study stimulated public debate on issues of importance to all stakeholders within the system, including access to continuous professional development opportunities, collaboration among teachers, and the future benefits of assessment and feedback practices embedded in teachers' daily work. These two areas—assessment and feedback—need to be further developed in Spain as tools to enhance teachers' confidence in their own professional capabilities. This represents a crucial step, as emphasized by the TALIS study, given that teachers play a central role in our education system and their value to society is immeasurable."

The number of countries participating in the TALIS study has been steadily increasing from year to year.

- TALIS 2008 involved 24 countries and economies.

- In 2013, the number increased to 34, and in 2014 the survey was conducted in an additional four countries.

- In 2018, more than 45 countries and economies participated.

- TALIS 2024 involves 50 participating countries and economies.

Avstraliya	Vengriya	Norvegiya	Braziliya	Malta
Avstriya	Islandiya	Portugaliya	Bolgariya	Ruminiya
Belgiya	Isroil	Slovakiya	Xitoy (Shanxay)	Rossiya Federatsiyasi
Kanada (Alberta)	Italiya	Sloveniya	Xitoy Taypeyi	Saudiya Arabistoni
Chili	Yaponiya	Ispaniya	Kolumbiya	Singapur

Chexiya	Latviya	Shvetsiya	Xorvatiya	BAA
Daniya	Koreya	Turkiya	Kipr	Vietnam
Estoniya	Meksika	Buyuk Britaniya	Gruziya	O'zbekiston
Finlandiy	Niderlandiya	AQSH	Qozog'iston	Ozarbayjon
Fransiya	Yangi Zelandiya	Argentina (BA)	Litva	Kosta-Rika

Starting from the TALIS 2024 cycle, Uzbekistan has been officially designated as a participating country. Each education system taking part in the TALIS study may choose to implement the survey at one or more of three levels of education, as follows:

Primary education (International Standard Classification of Education — ISCED Level 1),

Lower secondary education (ISCED Level 2),

Upper secondary education (ISCED Level 3).

For each selected level, a representative sample of approximately 4,000 teachers drawn from around 200 schools in each participating country or economy, together with their school principals, complete the TALIS questionnaires.

In the TALIS 2024 study, participating countries provide information on which levels of education the survey will be conducted.

№	Mamlakatlar	ISCED 1	ISCED 2	ISCED 3
1.	Albania		X	
2.	Alberta (Canada)		X	
3.	Australia	X	X	
4.	Austria		X	
5.	Azerbaijan		X	
6.	Bahrain		X	
7.	Brazil	X	X	
8.	Bulgaria		X	
9.	Chile		X	
10.	Colombia		X	
11.	Costa Rica		X	
12.	Croatia		X	X

13.	Cyprus1		X	
14.	Czechia		X	
15.	Denmark		X	X
16.	Estonia		X	
17.	Finland		X	
18.	Flemish Community (Belgium)	X	X	X
19.	France	X	X	
20.	French Community (Belgium)	X	X	
21.	Hungary		X	
22.	Iceland		X	
23.	Israel		X	
24.	Italy		X	
25.	Japan	X	X	
26.	Kazakhstan		X	
27.	Korea	X	X	
28.	Kosovo		X	
29.	Latvia		X	
30.	Lithuania		X	
31.	Malta		X	
32.	Montenegro		X	
33.	Morocco	X	X	
34.	Netherlands	X	X	
35.	New Zealand	X	X	
36.	North Macedonia		X	

37.	Norway		X	
38.	Poland		X	
39.	Portugal		X	
40.	Romania		X	
41.	Saudi Arabia	X	X	X
42.	Serbia		X	
43.	Shanghai (People's Republic of China)		X	
44.	Singapore		X	
45.	Slovak Republic		X	
46.	Slovenia	X	X	X
47.	South Africa		X	
48.	Spain	X	X	
49.	Sweden		X	
50.	Turkiye	X	X	X
51.	United Arab Emirates	X	X	X
52.	United States		X	
53.	Uzbekistan		X	
54.	Viet Nam		X	

Based on the above information, it can be seen that Uzbekistan will participate only at the lower secondary education level (ISCED Level 2, grades 5–9).

On October 16, 2025, the results of the TALIS 2024 international survey were released. From these results, the following insights about the education system in Uzbekistan can be drawn:

Age Composition of Teachers. According to the survey results, teachers in Uzbekistan are relatively young, with an average age of 39 years, compared to 45 years in OECD countries. Teachers under the age of 30 account for 22 percent, which is twice the OECD average.
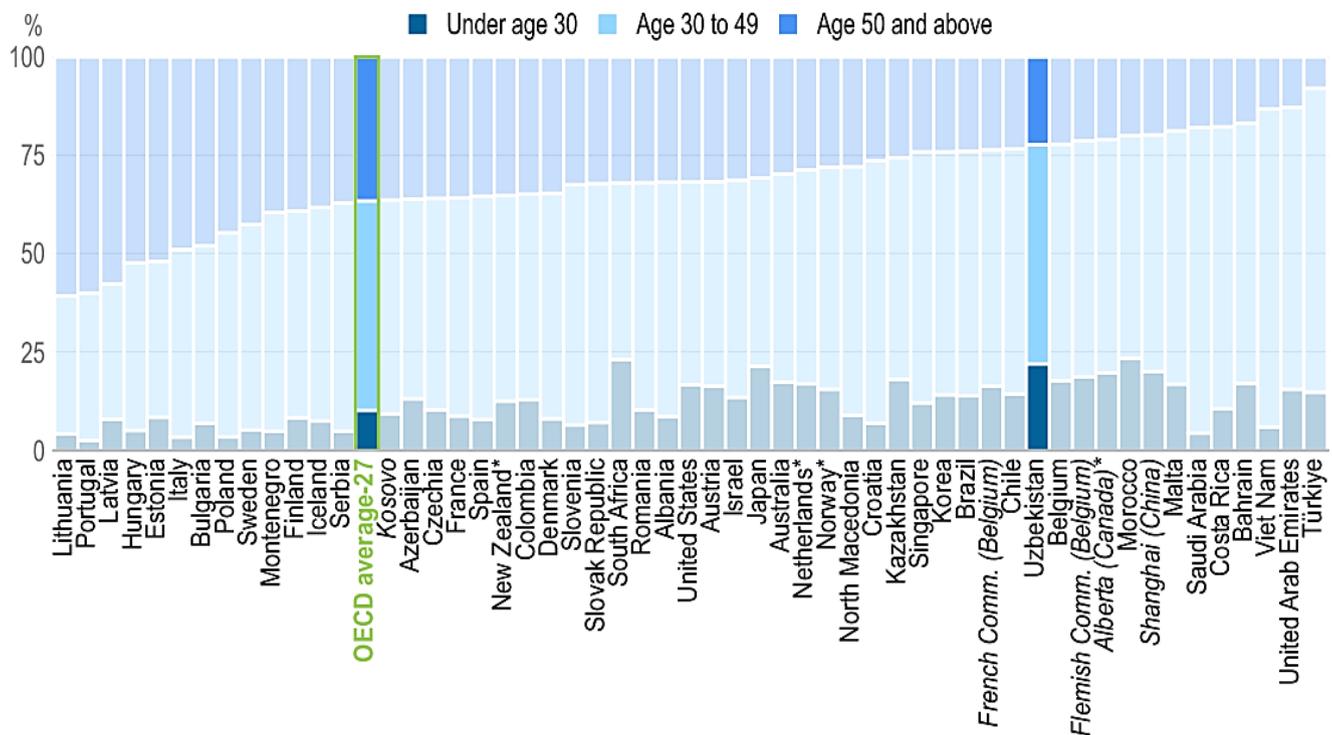
In Uzbekistan, 20 percent or more of teachers are under the age of 30. In education systems with such a demographic profile, younger teachers may have limited professional experience. Therefore, creating opportunities for professional development and balancing teachers' experience within schools represent pressing issues that require political attention and strategic measures.

Gender composition of teachers. In Uzbekistan, 64 percent of teachers are women and 36 percent are men, which is below the OECD average of 70 percent. This indicates that the proportion of male teachers in Uzbekistan is relatively high compared to the OECD average. On one hand, this suggests that the teaching profession is not exclusively associated with women, and on the other, it reflects a growing interest among men to pursue a career in education.

According to the results of the TALIS 2021 trial survey in Uzbekistan, women accounted for 68.5 percent of teachers and men 31.5 percent (as of September 2020, based on data from the State Statistics Committee). This shows that there have been certain changes in the gender composition of teachers in Uzbekistan's education system. While the share of women was 68.5 percent in 2021, it has now decreased to 64 percent, indicating an increasing proportion of male teachers. This trend reflects a gradual restoration of gender balance within the teaching profession.

Teachers' Use of Artificial Intelligence. According to the survey, 62 percent of teachers in Uzbekistan reported using artificial intelligence (AI) in their work, which is significantly higher than the OECD average of 36 percent. Teachers primarily use AI for facilitating effective learning and summarizing subject content (92 percent), developing lesson plans or activities (91 percent), and reviewing information on student participation or performance (86 percent).

Among teachers who reported not using AI in their work during the 12 months prior to the survey, 46 percent indicated that they lacked the knowledge and skills to apply AI in teaching, which is lower than the OECD average of 75 percent. Additionally, 54 percent of teachers stated that their schools lacked the infrastructure necessary for AI use, which is higher than the OECD average of 37 percent.

The following diagram illustrates the proportion of teachers who reported using AI in their work within the last year.

95% Confidence intervals are shown as **error bars**
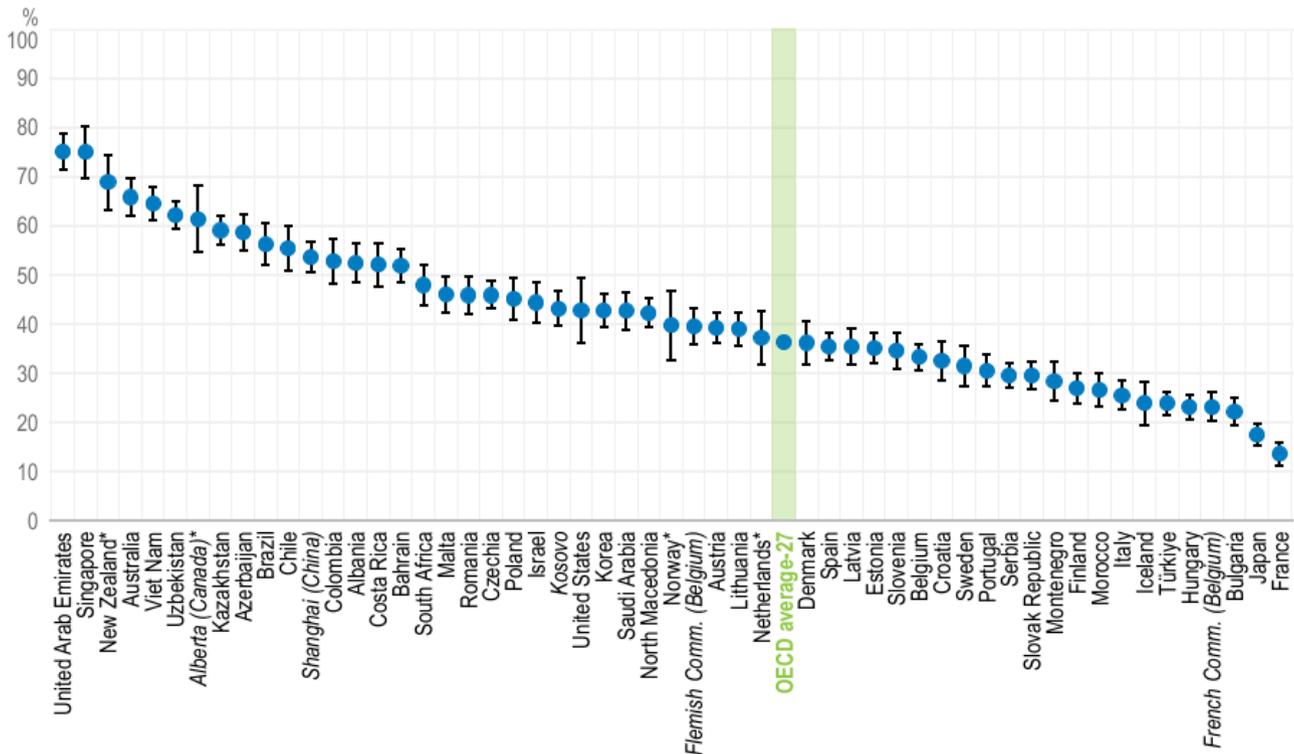
Mentoring Mechanism. According to the survey, 87 percent of teachers who started working at their schools within the last five years reported being involved in induction programs, which are designed to help new staff integrate into the school community. This proportion is higher than the OECD average of 72 percent. In addition, 56 percent of teachers with less than five years of experience were assigned a mentor, significantly exceeding the OECD average of 26 percent. Furthermore, 97 percent of teachers work in schools where mentoring mechanisms are established, compared to 81 percent across OECD countries.

For context, in Uzbekistan, it is currently a standard practice in general secondary education institutions to assign an experienced teacher as a mentor to individuals beginning their professional career for the duration of one academic year. This practice is also reflected in the Law on the Status of Pedagogical Workers. Teachers providing mentorship may receive additional compensation on top of their base salary for fulfilling mentoring responsibilities.

Professional Development System. According to the survey, 65 percent of teachers who participated in professional development or training activities within the 12 months prior to the survey reported that these activities had a positive impact on their teaching quality, which is higher than the OECD average of 55 percent. Interestingly, the proportion of younger teachers reporting benefits from professional development was nearly equal to that of more experienced teachers.

The areas in which teachers expressed the greatest need for professional development were:

• Curriculum knowledge — 50 percent

• Student assessment methods — 47 percent

• Pedagogy — 45 percent

Among younger teachers, the priorities were almost identical:

• Curriculum knowledge — 50 percent

• Pedagogy — 49 percent

• Student assessment methods — 48 percent

Teachers identified the main barriers to participating in professional development as:

• Insufficient opportunities or conditions to participate — 38 percent

• Lack of incentive mechanisms — 34 percent

• Insufficient availability of relevant and useful professional development programs — 31 percent

Younger teachers considered the following barriers most significant:

•   Insufficient opportunities or conditions to participate — 35 percent

•   Lack of incentive mechanisms — 33 percent

•   High cost of professional development activities — 26 percent

Professional Relationships Among Teachers. In Uzbekistan, the most common forms of collaboration among teachers are:

•   Observing and providing feedback on colleagues' lessons (lesson analysis) — 79 percent

•   Sharing teaching materials with colleagues — 73 percent

•   Collaborating with other teachers in the school to assess student achievements — 65 percent

Furthermore, 95 percent of teachers reported that they can rely on their colleagues within the school, which is higher than the OECD average of 86 percent.

Relationships with School Principals. In terms of interaction with school leaders, 94 percent of teachers indicated that their school principals maintain a positive professional relationship with staff, exceeding the OECD average of 86 percent. Additionally, 95 percent of teachers noted that principals provide useful guidance to teachers and staff, compared to the OECD average of 77 percent, and 96 percent reported that principals trust teachers' professional competence, above the OECD average of 92 percent.

Teacher-Student Relationships. In Uzbekistan, 95 percent of teachers agreed with the statement that teachers and students generally get along well, which is close to the OECD average of 96 percent. Additionally, 91 percent of teachers believe that students value teachers in their school, which is significantly higher than the OECD average of 71 percent.

Relationships with Parents. 90 percent of teachers reported that parents in their school value teachers, compared to the OECD average of 65 percent. Moreover, 60 percent of teachers collaborate with parents at least once a month to enhance students' learning experiences, well above the OECD average of 25 percent.

Status of Teachers. The high status of the teaching profession in a country helps attract qualified educators to schools and retain experienced teachers. In Uzbekistan, 87 percent of teachers stated that teachers are valued in society, which is far above the OECD average of 22 percent. 86 percent reported that policymakers in Uzbekistan value teachers, compared to the OECD average of 16 percent. Among teachers entering the profession, 84 percent indicated that teaching was their first conscious career choice, exceeding the OECD average of 58 percent.

Working Conditions. In Uzbekistan, 71 percent of teachers work under a permanent contract, below the OECD average of 81 percent. The likelihood of working under a fixed-term contract is almost the same for newly hired and experienced teachers, with 24 percent of teachers employed on fixed-term contracts, which is higher than the OECD average of 9 percent. 18 percent of teachers work part-time (up to 90 percent of full-time), similar to the OECD average of 19 percent. Among newly hired teachers, part-time work is slightly more common than among experienced teachers. A small proportion (5 percent) work under job-sharing arrangements, allowing some flexibility, although this is lower than the OECD average of 7 percent, indicating limited adaptability of working conditions in Uzbekistan. Overall, 82 percent of teachers are satisfied with their working conditions beyond salary, above the OECD average of 68 percent.

Satisfaction with Salary. 74 percent of teachers are satisfied with their monthly salary, substantially higher than the OECD average of 39 percent.

Achievement of Teaching Goals. In Uzbekistan, 49 percent of teachers reported achieving their teaching objectives across the seven areas covered by TALIS: conducting lessons clearly, developing students' thinking skills, providing feedback, consolidating knowledge, adapting to individual student needs, supporting students' social and emotional development, and managing the classroom. This is higher than the OECD average of 44 percent. The area with the lowest achievement is adapting lessons to individual student needs, with only 73 percent of teachers reporting success. Among teachers with less than five years of experience, 48 percent reported achieving all seven objectives, the same proportion as among experienced teachers.

Teacher Wellbeing. Only 8 percent of teachers in Uzbekistan reported experiencing excessive stress in their work, below the OECD average of 19 percent. Similarly, 8 percent stated that work has a very negative impact on their mental health (OECD average 10 percent), and 7 percent reported a very

negative impact on physical health (OECD average 8 percent). Teachers under 30 reported experiencing stress at the same level as colleagues aged 50 and above.

Job Satisfaction. Overall, 95 percent of teachers in Uzbekistan are satisfied with their profession, higher than the OECD average of 89 percent. Teachers in rural schools report satisfaction comparable to their urban colleagues. Among teachers under 30, 16 percent plan to leave the teaching profession within the next five years, below the OECD average of 20 percent.

CONCLUSION

The findings of TALIS 2024 provide a detailed and evidence-based picture of the teaching profession in Uzbekistan's lower secondary education system. The survey highlights that Uzbek teachers are relatively young, with a higher proportion of early-career professionals compared to OECD averages, which underscores the importance of targeted mentoring and professional development programs to support experience-building and maintain teaching quality.

The use of artificial intelligence and digital tools is above OECD averages, reflecting openness to technological innovations and the potential for further integration of digital pedagogical practices. The induction and mentoring systems are well-established, providing essential support for novice teachers.

Uzbek teachers report high levels of job satisfaction, social recognition, and professional status, along with relatively low levels of stress and negative impacts on mental and physical health. However, areas for improvement include adapting lessons to individual student needs, increasing opportunities and incentives for professional development, and enhancing working conditions for part-time and fixed-term teachers.

Overall, Uzbekistan's participation in TALIS 2024 demonstrates the strengths of the national education system in supporting teachers' professional growth and wellbeing while providing a clear roadmap for policy interventions aimed at sustaining teacher quality, enhancing educational outcomes, and aligning national practices with international standards.

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