POLICY BRIEF

GOING THE DISTANCE: READINESS FOR DIGITALIZATION AND DISTANCE EDUCATION IN TAJIKISTAN

Executive summary

- Tajikistan did not experience extended school closures as a result of the COVID-19 pandemic. Most students and teachers have had limited exposure to distance or digital education.
- The policy framework in Tajikistan is conducive to digital educational transformation, an ambition currently at odds with the country's digital infrastructure. Limited locally developed initiatives and significant barriers for teachers further constrain the adoption of digital tools.
- Gender inequalities and the persistence of gendered norms and expectations negatively affect girls' educational participation and outcomes. Boys are more prepared for digital education in all regions of the country.
- Recommendations include:
    - Expand forms of internet access at affordable prices.
    - Upgrade digital resources and technical support.
    - Address gender inequalities through digital technologies.
    - Create an environment that encourages and incentivizes teacher innovation.
    - Provide continuous professional development opportunities for teachers.
    - Increase public awareness about the benefits of digitalization.

Introduction

Unlike most countries, Tajikistan's schools did not experience extended closures with the onset of the COVID-19 pandemic. Instead, the 2019/20 school year was cut short by an extended summer holiday for more than 2 million school students in Tajikistan that lasted from the end of April until mid-August 2020. With health measures in place, educational institutions were subsequently re-opened for in-person, and have remained that way since. As a result, and due to limited diffusion of distance education prior to the pandemic, most students and teachers in Tajikistan have had limited exposure to distance or digital education. In comparison, digital tools and processes rapidly developed in other settings where school doors remained shuttered during the emergency period.

Nevertheless, recognizing the possibilities of digitalization for ensuring educational inclusion and equality of opportunity, Tajikistan has introduced a number of policies and initiatives to expand distance learning and digital education. These measures also take into consideration rapid population growth leading to a demographic environment where 50% of the nine million population are under the age of 24.

In this context, the project *Distance Education to Improve Quality and Access in Kyrgyzstan, Mongolia, and Tajikistan* was initiated in 2021. The project's aims were to study the experiences of these three countries in using distance education to identify innovations, challenges, and the prospects for digital transformation in distance learning. Particular attention was given to the use of distance education to address inequalities in educational access and quality.

This policy brief summarizes the project's three phase methodology and presents key findings from the research in Tajikistan. As Tajikistan has had more limited experience with distance education, the project focussed on readiness for digital and distance education, centring the experiences of students and teachers. The policy brief also includes recommendations for policymakers on further implementing distance education and digital transformation to improve quality and expand access to education in Tajikistan.

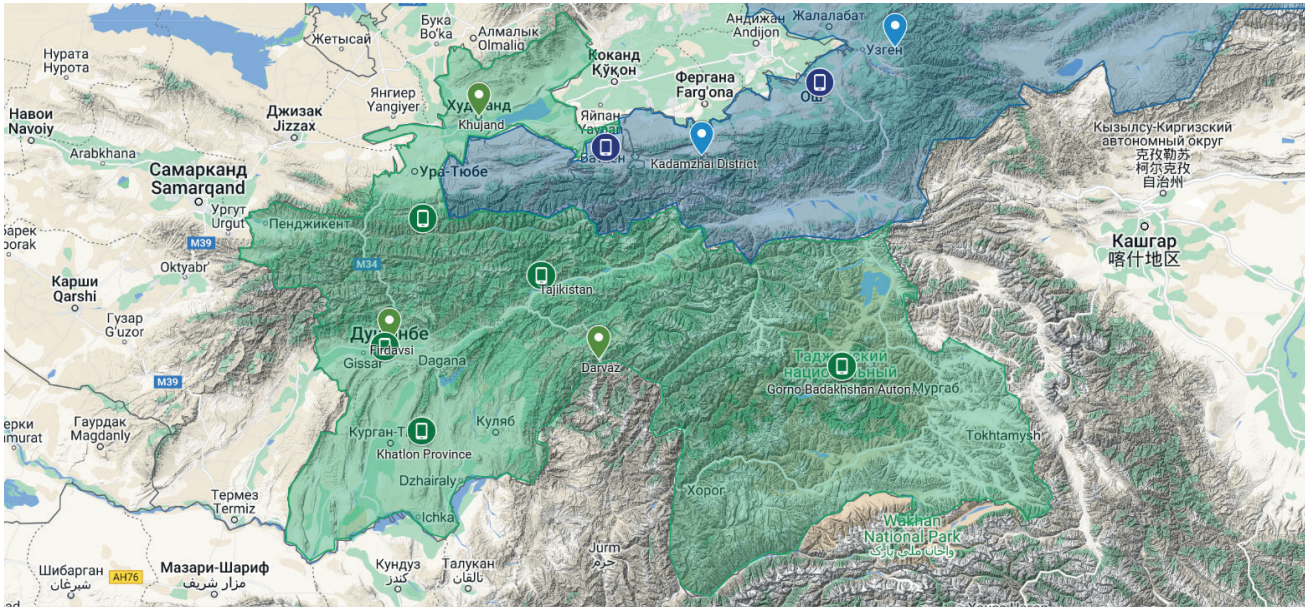
Methodology

Data for this project was collected in three phrases.

In *phase one*, desk research covering national policy documents and legislation, and research and reports relating to (distance) education and digitalisation strategies, innovations, and vulnerabilities was undertaken to establish the policy context.

In *phase two* (February-July 2022), the research team conducted 40 semi-structured interviews with local government officials, school administrators, IT and distance education specialists; 20 focus group discussions with students and parents; and participant observation. This qualitative research took place in the capital city Dushanbe, Yoget village in the mountainous Darvoz district, and Khujand city in the northern Sogd region (shown with green/white circular markers in Figure 1).

Figure 1: All research locations



In phase three (March-June 2023), a survey instrument was developed based on the findings from the qualitative research undertaken in all three project countries. The surveys were for students in grades 8-11 (ages 14-17) and teachers to understand their perceptions and experiences of distance education, and levels of preparedness for change in education.

Of Tajikistan's 3,884 schools, a two-stage cluster sampling technique was deployed to select 20 schools each in three regions and two cities (Figure 2) for a total of 100 schools. At each school, the survey was completed by 5 teachers and 20 students for a total of 500 teachers and 2,000 students. During data analysis, the results for Khujand and Sogd were combined and are presented together.

Figure 2. Survey locations

City/Region	Location type
Dushanbe	Capital city
Khujand	Second largest city, located in the north of the country in Sogd region
Districts of Republican Subordination (DRS)	Area around capital city covering nine districts and four cities
Khatlon	One of four provinces, in the south, most populous region
Sogd	One of four provinces, in the northwest of the country

Policy framework

The two key policy documents guiding the education system and the prospects for distance/digital education are the *National Strategy for Education Development 2020-2030* (NSED) and the *Concept on the Transition to Digital Education in the Republic of Tajikistan to 2042* (CTDE). Both were launched during the COVID-19 pandemic, which acted as a catalyst for policymakers in Tajikistan to prioritize and expedite the development and implementation of distance education policies.

The overall vision of the NSED is to achieve an "effective system of education, which ensures inclusive and equal opportunity and contributes to the development of skills, intellectual growth, employability and improving the overall welfare of the population of the Republic of Tajikistan" (NSED, p. 13). The strategy repeatedly mentions the need to expand distance learning at all levels of education. However, the NSED only considers distance learning an option for students with disabilities, and commitments to expanding internet access and connectivity are focussed on higher education.

The CTDE, introduced in 2022, aims to:

- Improve teachers' qualifications in the field of digital technologies;
- Develop training using modern and online technologies;
- Introduce digital educational programs;
- Develop criteria for the information and educational environment taking into account national and international standards;
- Augment technical equipment in educational institutions;
- Create a unified digital learning environment;
- Introduce new methods for teaching staff to work using ICT;
- Use distance learning technologies in education and popularize lifelong learning.

Digital infrastructure

The implementation of government education reforms in Tajikistan is taking place in the context of a weakly developed digital infrastructure.

By the start of 2023, the level of internet penetration reached 41%, up from 26% in 2020[1]. In comparison, internet penetration in neighbouring Kazakhstan exceeds 90%[2]. Furthermore, internet access in the country is considered expensive and is among the slowest in the world[3]. The country's predominantly mountainous terrain also poses connectivity issues.

The digital environment in schools is similarly challenged. In Dushanbe, 56% of teachers reported having internet access at school for conducting online classes, while the availability of internet in schools was reported as substantially lower in the regions, ranging from 9% to 25%.

Outside of school, 66% of teachers in Dushanbe, 63% in Khujand/Sogd, 53% in Khatlon, and 54% in Districts of Republican Subordination (DRS) reported having computers at home. In cases where the internet is not available at work, teachers have to rely on their personal means to access electronic resources.

> "We do not have internet at school. We use mobile internet at home, but it is very expensive."
>
> *Teacher, Sogd region*

In terms of school-level access to digital educational resources, the study found that online learning resources, tests, and teaching resources are used in approximately a quarter of schools in Dushanbe, in every tenth school in Khujand/Sogd and Khatlon, and by only 5-6% of schools in the Districts of Republican Subordination (DRS). However, even when schools are equipped with tools for digital education, maintenance seems to be a serious issue.

Initiatives and innovation

Although distance education was not widely deployed in Tajikistan during the pandemic, the study identified several initiatives to promote educational digitalization launched since 2020. In almost all cases, these were partnerships between the Ministry of Education and Science and international organizations. Examples include:

- ***Maktab Mobile***, an e-learning portal launched in 2020 with support from UNICEF and the European Union. It contains resources that are also available offline, an online library and attendance/reporting functionalities. In 2021, it reached 5,248 students and 248 teachers.
- ***Feed Me***, a mobile app introduced by USAID to support language acquisition for early readers and Tajik as a second language learners. The app has been downloaded over 7,000 times.

[1] https://datareportal.com/reports/digital-2023-tajikistan
[2] https://datareportal.com/reports/digital-2023-kazakhstan
[3] https://www.worlddata.info/asia/tajikistan/telecommunication.php#:~:text=With%20an%20average%20download%20speed,speed%20of%207.6%20Mbit%2Fsecond.

- ***Tomaktabi.tj***, the Tajik version of the Magic Box platform developed by UNICEF, Microsoft, and the University of Cambridge. The platform is designed to provide access to quality education for pre-school age children.

The platform ***eDonish*** is a notable example of a locally developed initiative. Launched in Dushanbe schools in August 2020, *eDonish* digitizes a series of paper-based processes and is designed to improve communications between students, families, and schools. It was created as a partnership between the local government in Dushanbe and the public enterprise Smart City. Used by 105 schools, *eDonish* reaches over 200,000 students.

In the survey, 70% of teachers indicated that their school has a department or person responsible for developing and sharing innovations to improve teaching effectiveness. However, very few teachers expressed interest in innovation. The most significant barriers are missing or unsuitable teaching equipment, lack of interest on the part of students, and teacher workload. One third of teachers indicated that fatigue with reforms and innovations was an obstacle to innovation.

> "We have electronic boards, but we do not use them. When the supplier delivered it, some spare parts were missing, I guess… We could not switch it on."
>
> *Teacher, Yoget, Darvoz district*

During interviews, administrators and school leaders emphasized the importance of creating an enabling environment for innovation, for example ensuring schools have the necessary technical equipment and that teachers are trained to effectively utilize digital tools. The study identified institutional constraints as included the lack of a conceptual framework defining educational innovation, the need for innovative ideas and practices to foster professional communities, and the inefficiency of structures responsible for evaluating and implementing innovation and funding. Moreover, there are a lack of practices related to building communities involving parents, teachers, and students.

Digital education readiness index

As part of the study, a digital education readiness index was created. Based on survey data, the index expresses the perceptions and attitudes of teachers and students in five areas related to digital learning and distance education. In Tajikistan, the overall digital education readiness index was 64% for teachers and 55% for studetns (Figure 3).

Figure 3. Digital education readiness index (%)

Factor	Teachers	Students
1. Online teaching/ learning	60	54
2. Digital communication	81	66
3. Basic computer skills	63	46
4. Advanced computer skills	73	61
5. Use of learning management systems	46	46
Overall readiness	**64**	**55**

The overall readiness index varies by region, with the highest score in Dushanbe (70% for teachers and 67% for students) and the lowest in the northern region of Khujand/Sogd (55% for teachers and 40% for students). Despite the fact that teachers have a higher level of readiness according to the index, there is a gap for some learners in the way ICT is taught. The study also found that almost no teachers (up to 3%) have benefited from professional development related to ICT skills in the last five years.

> "I don't like ICT classes; I feel I know more than my teacher."
>
> *Student, Dushanbe*

Gender inequalities

Lower educational participation and outcomes for girls in Tajikistan and the persistence of gendered norms and expectations for girls and boys were substantiated by the research. The study found that boys are often

prioritized for education as future providers, while girls are typically assigned domestic duties in preparation for marriage.

Parental attitudes varied, with some expressing uncertainty or reluctance regarding their daughters' educational paths, influenced by traditional gender roles and societal pressures. Girls frequently bear the burden of domestic work, impacting their ability to pursue education or career aspirations. Boys are more likely than girls to be taken by their parents to clubs, sports, and other extracurricular activities.

> "I do almost all the housework myself, although my dad tells me that my brother should help me, he doesn't want to do anything, and I have to do everything myself."
>
> *Female student, Dushanbe*

Students' readiness for digital education also varied by gender and across regions, with boys scoring higher than girls in the index in all regions. Of those that had access to a digital device, both girls and boys were more likely to get a smartphone during or after the pandemic, whereas the proportion obtaining a laptop, computer or tablet at this time was much lower. This could be explained by the relative cost of owning multiple devices and the cost/benefit expectation of having a mobile phone. In all regions except Dushanbe, more girls than boys had a smartphone, which may connect to parents' gendered safety concerns.

Conclusion

Tajikistan's rapidly growing and youthful population forms part of a dynamic social context that couples with the country's highly mountainous terrain to demonstrate the potential role that distance education, underpinned by well-developed digital infrastructure, could play in enhancing educational access and quality. Despite the country's limited experimentation with distance education during the pandemic, this potential has been recognized by developing a policy framework that promotes both educational digitalization and equality.

The study found that the digital infrastructure is currently inadequate, and that teachers face numerous barriers to innovating and deploying digital teaching technologies. Students demonstrate greater readiness for distance and digital education based on the digital education readiness index designed for this study and are particularly strong in digital communications and computing skills.

Regional variations in the research results show the greatest progress and readiness for digitalization in the capital Dushanbe compared to a lower starting point in Khujand/Sogd. Gender inequality was evident in all regions, with girls continuing to be disadvantaged by the persistence of gendered norms and expectations.

Looking ahead, the approach taken in this research project supports the establishment of a baseline for future educational innovations that can put into action the ambition laid out the recently established policy framework. At the same time, the study has identified some of the significant challenges remaining to be addressed as Tajikistan embarks on its digital educational journey.

Recommendations

1. Expand forms of internet access at affordable prices. Given the low rates of broadband and mobile internet access, there is a clear need to expand and improve internet infrastructure. Priority should be given to areas with lower rates of educational participation and attainment where gender inequality is higher.

2. Upgrade digital resources and technical support. Addressing inequalities in access to ICT resources in schools is vital. This may include investing in computer labs, providing schools with enough functional computers, and ensuring reliable internet connections. Additional hardware needs to be sustained by consistent and readily available technical support.

3. Address gender inequalities through digital technologies. The gender gap in Tajikistan's education system should be taken into account when implementing digital education initiatives. This could include targeted programs to promote and support girls' education, including access to digital tools and resources.

4. Create an environment that encourages and incentivizes teacher innovation. Innovations created by teachers, teacher communities and schools in everyday practice play an important role in improving the quality and effectiveness of education and their incentivization would address the multiple individual and systemic barriers to innovation.

5. Provide continuous professional development opportunities for teachers. The tasks of creating an effective digital learning environment, regularly updat-

ing teaching resources, the issue of improving the system of professional development of teachers remains relevant, which should form new knowledge, skills, including ICT competencies, methods for increasing student motivation, and developing independent work skills.

6. Increase public awareness about the benefits of digitalization. Raising awareness among students, teachers and parents about the benefits of digital education and providing necessary training and information can help with the adoption and effective use of digital resources. This is especially important in the regions where digital readiness is lower.

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Contact information

Policy brief prepared by Dr Emma Harden-Wolfson, Project Consultant

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For more information or to access the interim/final project report and materials, please contact:

Dr Jyldyz Doolbekova, Project Lead, Taalim-Forum, Bishkek, Kyrgyzstan
taalimforum@gmail.com
https://kix.taalimforum.kg/

Abduvohid Safarov, Project Country Coordinator
Jovidsho Juraev, Leader Researcher
anahitatj@gmail.com