



Policy Brief

Edu-Tech in Tajikistan

Blended Learning through Flipped Classrooms in the CAREC Region Designing a Data-Driven Flipped Classroom Program

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Asif Razzaq and Rabia Nazir

Background

Tajikistan faces significant educational challenges, including high learning poverty rates, where many children lack basic literacy and numeracy skills by age 10. Exacerbated by the COVID-19 pandemic, global learning poverty rates in low- and middle-income countries rose to 71%. Blended learning (BL) and the Flipped Classroom Model (FCM) have proven effective in improving engagement, critical thinking, and personalized instruction. However, Tajikistan's weak digital infrastructure, low digital literacy, and limited localized content hinder the implementation of these innovative models.

This study aims to develop a blended learning framework tailored to Tajikistan's context. It focuses on:

- 1. Identifying requirements for implementing FCM.
- 2. Evaluating the feasibility of blended learning models.
- 3. Offering actionable policy recommendations for sustainable FCM adoption.

The study group comprises 72 pupils, 12 instructors, and four administrators from schools with some digital resource usage. The findings provide Tajikistani policy stakeholders

with evidence-based insights to facilitate the integration of FCM into the national education system.

The Historical Development of Education in Tajikistan

The educational system in Tajikistan exhibits several structural deficiencies, including:

- Insufficient Digital Literacy: The Digital Skills Gap Index ranks it the 94th lowest globally.
- Challenges associated with the internet include the fact that only 35.44 percent of individuals can access it and unreliable mobile data speed.

- Insufficient ICT: IT resources and customized digital platforms are currently insufficient at educational institutions, and the broadband installation rate at homes is also relatively low, at 40.8%.
- Requirements for Teacher Training: In Tajikistan, teachers lack basic computer training, which may hinder their ability to implement the FCM effectively.
- Chronic underfunding: Insufficient financial resources for public schools impede digitization initiatives, teacher benefits, and infrastructure.

Despite these challenges, new initiatives such as collaborative efforts to enhance connectivity and digital platforms like E-Maktab and E-Donish demonstrate that development is achievable. Collaboration among different stakeholders is essential for maximizing the benefits of the BL programs and bridging structural gaps.

Key Findings

- 1. Infrastructure Preparedness: Various educational institutions possess disparate IT devices; not all are equipped with multimedia tools such as smartboards and smartboards.
- 2. Internet Access: Most individuals utilize their mobile phones for Internet connectivity due to the lack of broadband access at home.
- 3. Digital Literacy: Fifty percent of respondents require training in effectively using digital platforms despite ninety percent having access to gadgets.
- 4. Localized Content Deficiencies: FCM is ineffectively utilized in Tajikistan due to insufficient access to digital technologies among the populace.
- 5. Teacher Limitations: Insufficiently trained teachers and IT support personnel are a significant issue.
- 6. Learning Platforms: Most schools do not have Learning management systems (LMS) such as Edonish.

Key Features of the FCM Favored by Tajikistan Respondents

- Video lectures (VLs): Teachers prefer to present VLs during class to facilitate subsequent discussions, whereas students prefer to view them in class. Concise videos (ranging from five to twenty minutes) in local languages are essential to engage the audience.
- Methods for content dissemination: Most respondents utilize email, USB drives, and messenger to distribute and access online resources. Both teachers and students also favor YouTube and Learning Management Systems for accessing online resources.

- Student-Centric Learning: Students like VL as it enables them to learn at their own pace and revisit material as necessary.
- Equitable Workload: Both educators and learners emphasize the necessity of regulating the volume of assignments and discussions to prevent excessive stress.
- Teacher Support: To encourage teachers to utilize FCM, they require financial incentives, opportunities for professional development, and recognition.

Strategies for addressing FCM-related issues in Tajikistan

Temporary (under one year)

- 1. Training Programs: Provide educators and learners with essential IT and digital literacy training, supplemented by practical manuals and refresher courses.
- 2. Localized Content Development: Collaborate with educational institutions to produce digital resources in Tajik that align with the national curriculum.
- 3. Facilitate affordable Internet Access: Engage with telecommunications providers to propose cheap Internet services for educational institutions and students.

Medium-Term (one to three years)

- 1. Enhancing infrastructure: Provide classrooms with essential IT equipment, such as projectors and smartboards, to compensate for the deficiency of multimedia resources.
- 2. Unified Learning Platform: Develop a Learning Management System (LMS) featuring user-friendly features for content management, communication in Tajik and Russian, and assessment administration.
- 3. Incentives for educators: Provide financial compensation, opportunities for professional development, and collaborative accountability in creating virtual learning environments.

Long-Term (3–5 years)

- 1. It is advisable to allocate long-term resources for digital tools, IT upkeep, and continuous professional development.
- 2. Revamping the curriculum: Emphasize blended learning techniques and completely integrate FCM concepts into the national education framework.
- 3. Assess and Evaluate: Ensure mechanisms are in place to assess the outcomes of FCM and BL strategies while guaranteeing their applicability for future and broader implementation.

Common recommendations for the region

- 1. ICT Investments: Provide locations with poor connectivity offline FCM alternatives and equip schools with necessary IT resources.
- 2. Empowering educators: Develop uniform training resources for utilizing FCM that provide continuous support to teachers.
- 3. Adaptive Digital Strategies: Develop FCM models that are adaptable to various regions' requirements while safeguarding privacy and data integrity.
- 4. Community Involvement: Parents, educators, and other key stakeholders should participate in developing FCM to optimize resource utilization and support.

Call for Action

The digital divide and equitable access to education in Tajikistan constitute urgent concerns. Prompt initiatives such as training programs, local resources, and internet subsidies can facilitate the implementation of FCM while investing in infrastructure and educator incentives, which are essential for ongoing development. Cooperation among governmental, commercial, and international sectors is crucial for remedying educational shortcomings and creating an inclusive, advanced education system.