Policy Brief

Edu-Tech in Pakistan

Blended Learning through Flipped Classrooms in the CAREC Region

Designing a Data-Driven Flipped Classroom Program

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June 2025

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Policy Brief: Edu-Tech in Pakistan

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

Asif Razzaq and Rabia Nazir

Background

The COVID-19 epidemic has exacerbated learning poverty, impacting 71% of children in low— and middle-income nations. The reasons usually are insufficient resources, unqualified educators, and obsolete curricula. The Flipped Classroom Model (FCM) and blended learning (BL) can effectively address this by amalgamating digital tools with conventional pedagogical approaches. Nonetheless, insufficient infrastructure and computer literacy continue to pose challenges, particularly in low-income nations. This study seeks an effective blended learning model for the CAREC region that integrates FCM.

1. To ascertain the fundamental prerequisites for implementing FCM in CAREC nations.
2. To evaluate the efficacy of the BL and FCM models across various scenarios.
3. To produce practical and implementable policy recommendations.

The research examines public educational schools in four CAREC nations: Pakistan, Kazakhstan, Tajikistan, and Uzbekistan. It examines regions with median Human Development Index (HDI) values. The sample from Pakistan comprises 148 children, 24 educators, and eight administrators. It examines the influence of gender and socioeconomic level on the adoption of FCM.

The State of Education in Pakistan

The educational system in Pakistan encounters issues that impact its entirety:

- Gender and Regional Disparities: Girls and individuals residing in rural regions encounter more significant educational obstacles than other demographics.
- Infrastructure Deficiencies: Pakistani schools largely lack the necessary digital equipment, such as computers, electricity, and multimedia.
- Inadequately qualified teachers and outdated curricula exacerbate the disparity between public and private schools.

- Digital Divide: Only 36.7% of individuals in rural regions have an internet connection, so utilizing digital tools and resources poses significant challenges.

Recently, initiatives such as Taleem Ghar, TeleSchool, and e-Learn Punjab have attempted to address these deficiencies, but challenges persist. Significant issues persist, such as inadequately equipped computer labs, sluggish internet connections, and individuals lacking proficiency in technology usage. Initiatives such as the LMS platform in Islamabad exhibit potential; nevertheless, they must be implemented nationwide to ensure equitable access for all individuals.

Key Findings from the study

1. The digital divide in schools is characterized by inadequate infrastructure, insufficient IT support, and the prohibitive cost of internet access.
2. Insufficient digital literacy: Both educators and learners lack the fundamental IT competencies required to use blended learning (BL) and flipped classroom models (FCM), complicating their adoption.

- Resource Limitations: The majority of educational institutions lack multimedia or smart boards. The computer laboratories are inadequately furnished, with an average of 14 computers per institution, many of which are inoperative.
- Prohibitive Costs: The financial strain of internet access continues to be a substantial concern for both households and educational institutions

1. Insufficient Utilization of Technology: Digital tools are underutilized, and schools are observed to employ innovative online platforms infrequently.
2. Teacher workloads: The high student-to-teacher ratio hinders educators from experimenting with innovative teaching methods.

In Pakistan, the key aspects of FCM are as follows:

- Concerning video lectures (VLs), students prefer those under 10 minutes for home viewing, whilst educators advocate for 15-minute sessions for classroom instruction.
- Material Delivery: Students choose platforms such as YouTube and Learning Management Systems (LMS), whereas educators favor school websites due to enhanced control over the content. The respondents from Pakistan like the local language for the VLS to enhance cultural relevance.

For an optimally structured environment for education, utilizing in-person and online work is essential to prevent students from becoming overwhelmed and maintaining their engagement.

- Both educators and learners must engage in consistent feedback mechanisms to ensure the integration of traditional and digital learning methods.
- FCM requires institutional backing and accessible resources to function effectively. Educators emphasize the significance of feasible assignments and monetary incentives.

Recommendations for Pakistan

Short-term

1. Mandatory Digital Literacy Training: Implement compulsory training sessions for educators and students, emphasizing fundamental digital competencies.
2. Initiate the FCM Implementation Pilot: Commence the integration of FCM in grades 8 and 9 by including one to two mixed lessons monthly in select schools.
3. Subsidizing internet access and equipment involves collaborating with telecommunications firms to provide affordable internet plans and devices for children and educators.

Medium-term

1. Enhancing the IT infrastructure entails providing educational institutions with video equipment, computer laboratories, and interactive whiteboards. Initiatives that distribute laptops to students at all educational levels should also be implemented.
2. Collaborate with the Ministry of Education to provide regional language adaptations of video lessons and assessments that align with the curriculum.
3. Teacher Incentives: Provide financial compensation and salary increases to teachers who effectively implement the concept and complete FCM training.

Long-term

1. Ensure the nationwide expansion of digital platforms, specifically e-Taleem and other LMS platforms, to facilitate practical virtual training and material dissemination throughout the country.
2. Sustainable Funding: To develop and sustain IT infrastructure and secure financial resources from international donors, such as the Islamic Development Bank.

3. Community Engagement: Parents, educational authorities, and municipal governments must participate in formulating and implementing FCM plans to foster collaboration and ensure sustained success.

Common Recommendations for the CAREC 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 Engagement: collaboration between all important stakeholders such as parents, teachers and ministries be ensured for optimal resource utilization and impact.

Call for Action

Pakistan and the CAREC region should prioritize blended learning to bridge the educational divide. They should invest in IT infrastructure, educator training, and technology utilization instruction and implement pilot programs and scalable models before comprehensive implementation.