ICT for Education in Developing South Asia

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The Education University of Hong Kong ranked 2nd in Asia and 13th in the world in Education (QS World University Rankings by Subject 2017)
Countries in South Asia face two major education roadblocks:

i. unequal access to quality education

ii. lack of capacity of their graduates to learn how to learn to contribute to their country’s economic growth in an increasingly complex and globalized world
These two roadblocks compromise the equity, quality, and efficiency of the education sector, and are major impediments to the quality enhancement of human capital for a sustainable and growing economy.

(Ra, Chin, & Lim, 2016)
Opportunities of ICT for Education in South Asia

• **For the education sector:** to improve its equity, and enhance its quality and efficiency. With respect to equity, ICT has the potential to broaden the access to quality education.

• **For teachers:** direct impact on building the capacity of teachers to enhance the quality of teaching and learning. With the pervasive use of mobile technologies with better access to the internet, massive open online courses (MOOCs) have the potential to transform teacher professional development by providing better access to quality professional learning opportunities for teachers in remote, rural, and urban areas.

• **For students:** to monitor and manage their own learning and, hence, develop their lifelong learning competencies. This will enhance the external efficiency of the education sector by preparing students to live and work in the increasingly complex world.
The governments of South Asia are aware of the opportunities of ICT to enhance education equity, quality, and efficiency and have co-invested (with aid agencies, private sector, and international and/or regional organizations) to take up these opportunities.

Despite the investment of ICT in education of these countries, sustainability and scalability of promising practices are a challenge. Moreover, how ICT has been used and its impacts have varied significantly between and within schools, and between and within regions.

To examine the existing state and gaps of ICT in education in the Bangladesh, Nepal, and Sri Lanka, a system perspective of ICT in education has to be adopted.
A holistic approach to ICT in education consists of 7 dimensions of the national education system driving and supporting ICT in education.

Model of stages of ICT in Education

These four stages are situated in the pedagogy–technology nexus where the pedagogy axis represents increasing changes of teaching practices (toward more learner-centered ones) due to ICT in education and the technology axis represents increasing ICT use and more variety of use in education.

System Perspective of ICT in Education

**Bangladesh and Nepal: Emerging stage**

- Awareness of the potential of ICT in addressing education equity, quality, and efficiency at the national and school levels
- Although there are various ICT in education initiatives that have been implemented by government and nongovernment agencies, and local and international organizations, these efforts are not coordinated at the national level.
- Low ICT use for teaching, learning, and administration
- Most teaching practices remain teacher-centered
- Most teachers have a basic level of ICT in education competencies
- Most schools have limited ICT tools and infrastructure
Sri Lanka: Applying stage

- Schools have better access to ICT infrastructure and resources
- There is an effort to coordinate the various ICT in education initiatives, and to ensure that national ICT and education policies drive and support the use of ICT for teaching, learning, and administration.
- Although teachers are using ICT to enhance the quality of teaching, the focus is on the teachers using ICT for their teaching rather than students using ICT for their learning.
- In most cases of students using ICT, they are within the context of ICT as a curricular subject to develop students’ ICT competencies.
1) National ICT in education vision, policies, and strategies

Bangladesh:

• National Education Policy (NEP) 2010: emphasis on the use of ICT to improve the quality of education and identifies the following ICT in education strategic priorities. These strategic priorities, when operationalized, could move Bangladesh from the emerging stage to the applying stage of ICT in education adoption.

• The Access to Information program (A2I): the central hub for facilitation and oversight of the implementation of ICT related-activities. The key strategic priorities identified for action by A2I (2011) are (i) enhance domestic and international connectivity, (ii) expand telecommunication services, (iii) enhance access to broadband, (iv) enhance last-mile connectivity, and (v) develop content and improve services.
1) National ICT in education vision, policies, and strategies

Nepal:

Master Plan 2013–2017 (Government of Nepal 2013) (The only country to have an ICT in education master plan)

Vision: to ensure quality education for all through the use of ICT in all aspects of education.

Goals: expanding equitable access to education, enhancing the quality of education, reducing the digital divide, expanding access to teaching and learning materials, and improving the service delivery system in education

Implementation:
- computer education in schools
- websites for all ministries and departments and district offices
- information and communication technology officers

With the master plan in place, Nepal is in a good position to move toward the applying stage of ICT in education adoption in the medium term.
Making Sense of ICT in Education in South Asia

1) National ICT in education vision, policies, and strategies

Sri Lanka

• **Vision of Unstoppable Sri Lanka 2020**: future generations of citizens of Sri Lanka are equipped with competencies to meet the challenges of a changing, globalized, and knowledge-driven economy. Although this is not the ICT in education vision, the pivotal role of ICT to realize this vision is clear.

• Government and several private sector organizations have been made contribution to promoting ICT in education. These initiatives led to significant improvements in ICT infrastructure facilities and capacity building of teachers, principals, and administrators on the use of ICT in teaching, curriculum, and digital content development., and improving internet connectivity.

• However, Sri Lanka has yet to develop a master plan or overall program to ensure the full integration of ICT in education.
5) Improvements in learning environment

Integration of ICT in education is a highly difficult process in all three countries.
- The education sector in all three South Asian countries is still dominated by the conventional learning environments:
  - Students meet in structured classrooms at specified times
  - Teachers cover standard content by lecturing in front of a large class
  - Students listen and take notes, work individually, and reproduce on assessments
- In spite of planning or programs started to change the teaching and learning system, there are hindering weaknesses that need to be addressed within a well-coordinated and continuing reform agenda, e.g.
  - below-average performance in subjects like mathematics and science
  - low competence in English
  - less exposure to ICT
  - unequal distribution of resources between the center and periphery, and
  - poor maintenance of existing infrastructure
- Mixed views on the impact and effectiveness of ICT in education
6) Improvements in assessment and examination

In all three South Asian countries, Assessments in schools are very much **summative** in nature, and the high-stake examinations are still the key driver of teaching and learning practices in schools.

**Bangladesh:**
- ICT would not immediately improve the result of exams, teachers are often apathetic or often even disapprove of the use of ICT in teaching.

**Nepal:**
- Discussion about the need to improve student assessment: how ICT could be leveraged to assess students better and in a continuous manner.

**Sri Lanka:**
- The ministry is in the process of rethinking the mode of assessment and identifying the role of ICT in this mode of assessment.
7) Improvements in education management information system (EMIS)

**Bangladesh:**
- No new monitoring framework or mechanism has been developed to ensure that multimedia classrooms are being utilized to their full potential
- Using the existing inspection structure for this purpose.

**Nepal:**
- A national fund would be established from government development partners and the private sector to aid research and development activities of ICT-enabled teaching and learning.
- No existing mechanism in place to evaluate the use and impacts of ICT in education.

**Sri Lanka:**
- The cost of project interventions on ICT education has been very high in Sri Lanka
- The progress needs to be assessed in terms of sector-wide coverage, learner performance, and socioeconomic impacts
- The entire system of supervision on the quality of ICT education is also unsatisfactory.
Lessons Learned and Planning for ICT in Education

1) Better coordination of ICT in education initiatives and efforts within the education sector and with other sectors;

2) Better technical support for teachers as they use ICT for teaching and learning;

3) Just-in-time and differentiated ICT in education professional learning for teachers in schools;

4) Better pedagogical support for teachers using ICT for teaching and learning;

5) Localized and customized intelligent tutoring system, video-recorded lessons, and ICT-mediated resources;

6) Monitoring and evaluation of ICT use in schools.
Conclusion and Recommendation

The review findings show variances in the priority areas and development levels of ICT in education among Bangladesh, Nepal, and Sri Lanka, mainly due to their unique national contexts.

The review also suggests that many ICT initiatives in these countries are undertaken without paying adequate attention to the required ICT ecosystem in which they work.

- As an ICT ecosystem would require a good deal of resources and human capital, the scope and sequence of initiatives must be prioritized when addressing equity, quality, and efficiency issues of education with ICT.

- Policy makers have to be aware of how ICT can be of best value in their own country’s education system, and need to develop a supportive policy environment and framework at the national level for the integration of ICT into their education systems.
Governments of these three countries could adopt a sequential approach with clear milestones to achieve in different years.

- A master plan with identified actions for short-term and medium- to long-term impacts on the use of ICT in education could be adopted as a driving force, although it may not always address the coordination issues.

- As the implementation of the master plan and policies would require coordinated action in different areas of the education system, policy dialogue needs to be taken between stakeholders for working together.

With continuous efforts, countries in South Asia may ultimately move toward an ICT-enabled teaching and learning environment that supports the existence and growth of a knowledge-based society.
THANK YOU!!!

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