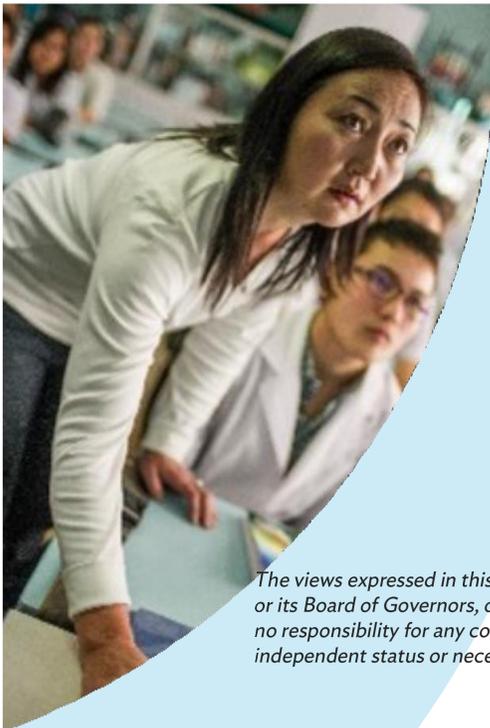
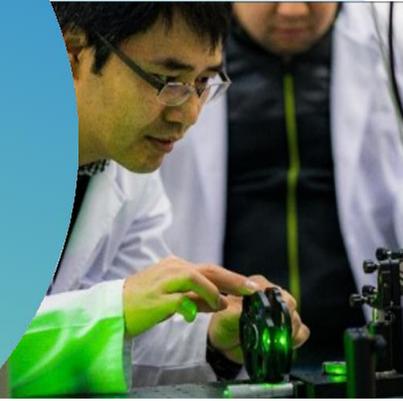


The logo for the Asian Development Bank (ADB), consisting of the letters 'ADB' in white serif font on a dark blue square background.

Vision for Transforming Education

Presentation made at the ADB-Microsoft Summit Held during 28-30 June 2022

Brajesh Panth
Chief of Education Sector Group
Asian Development Bank

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Presentation Outline



WHERE WE ARE

- Asia and the Pacific: Progress in Education
- Drivers of Change
- Challenges, Opportunities, and Lessons Learned



WHERE WE WANT TO GO

- ADB's Vision and Strategy



WHAT WE WANT TO DO

- The Importance of Systems Thinking
- Turning the Crisis into an Opportunity
- The Two-Pronged Approach
- Examples of Innovative and Trend Setting Projects and Initiatives

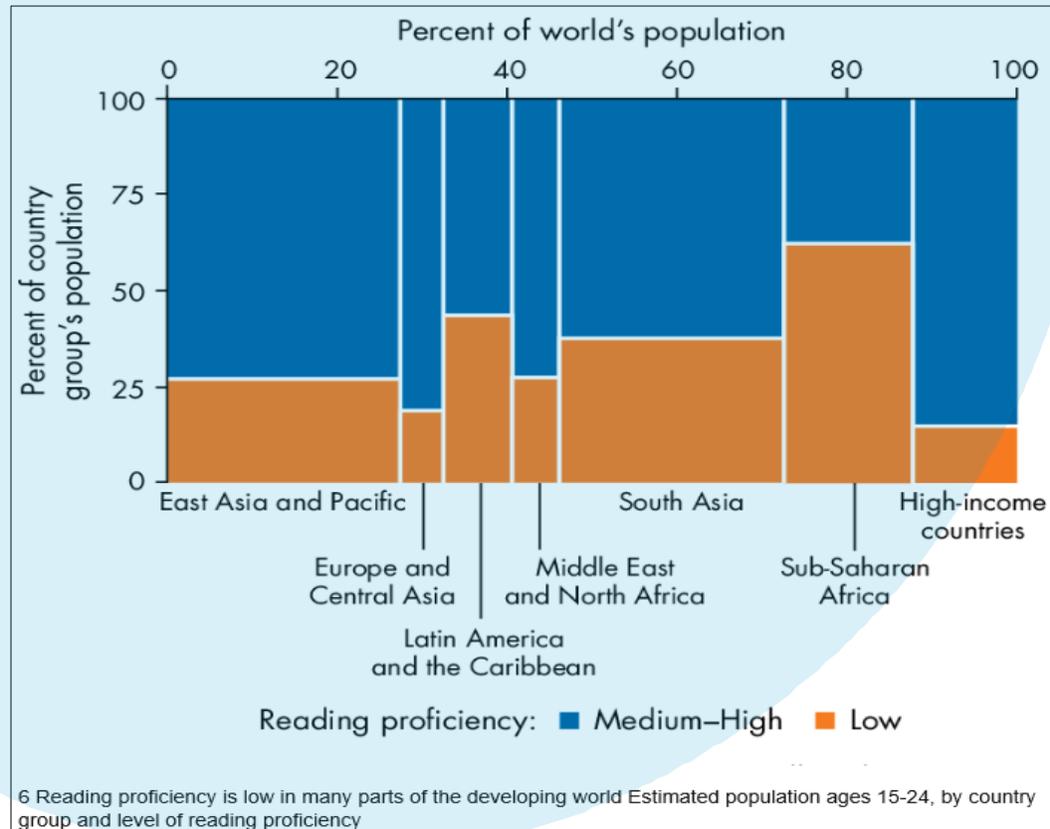


SAVE OUR FUTURE
Averting an Education
Catastrophe

Source: Save our Future campaign.

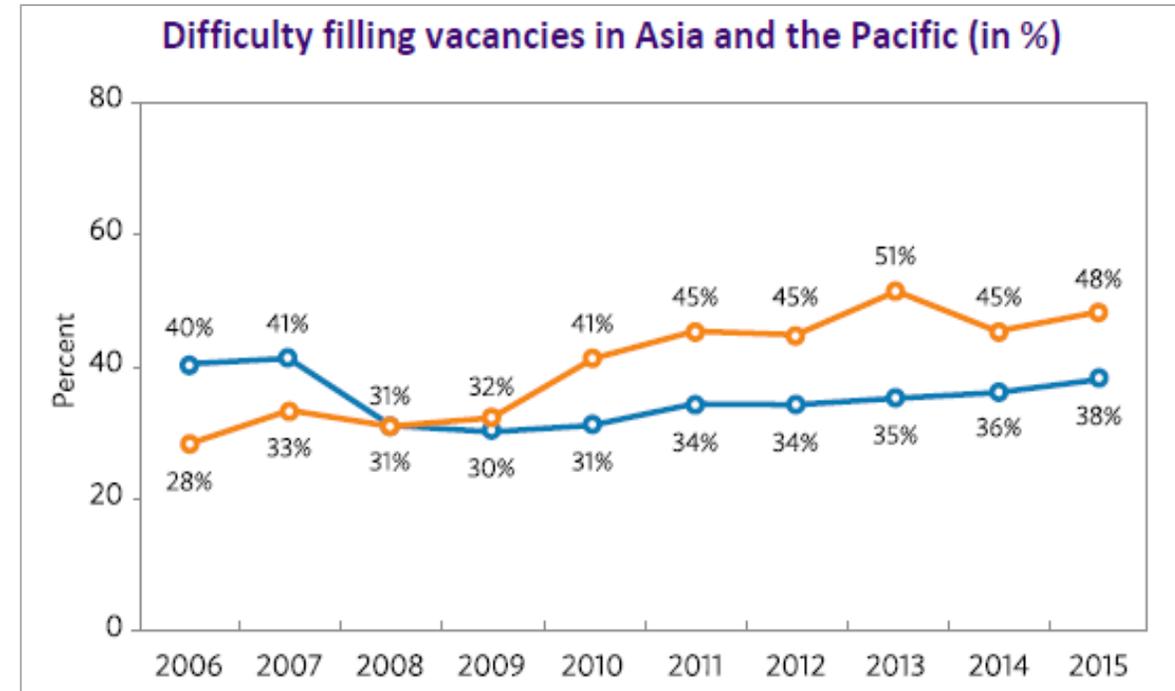
Twin Challenges of Education Sector and the Trilemma (quality, cost, and scale)

Most of the people with low reading proficiency are in the Asia and Pacific Region.



6 Reading proficiency is low in many parts of the developing world Estimated population ages 15-24, by country group and level of reading proficiency

Source: World Development Report 2018.



Source: 2015 Talent Shortage Survey (Manpower Group, 2015).

Subsector Level

School Education

- Poor learning persists in many developing member countries (DMCs)
- Still a large number of school children are out of school
- Universal secondary education remains a dream in many DMCs

TVET

- Weak technical and vocational education and training (TVET) system (underfunded, undermanaged, supply driven, and fragmented)
- Poor relevance and weak private sector engagement
- Weak governance

Higher Education

- Poor quality and relevance
- Weak university-industry linkages
- Weak governance and inadequate financing to respond flexibly to emerging labor market and entrepreneurship needs

Common

- Poor learning and persistent inequity
- Weak capacity and governance to respond to labor market needs and entrepreneurship
- Limited innovations in pedagogy, financing, use of technology, and service delivery

Subsector Level

School Education

- Promote pedagogical innovations to scale quality and equity (curriculum simplification, continuous formative assessment, adaptive learning)
- Strengthen education workforce (teachers, principals, others)
- Strengthen governance and accountability

TVET

- Integrate TVET with priority sectors (infrastructure, urban)
- Introduce responsive governance structures and mechanisms
- Expand private sector collaboration (enterprise-based training)

Higher Education

- Prioritize equity in expanding enrollment
- Promote university-industry linkages in priority sectors
- Promote innovations in financing, governance, and entrepreneurship

Common

- Pedagogical innovations (STEAM, green skills, digital skills, and education technology [EdTech])
- Governance and accountability (data quality and evidence)
- Workforce development in priority sectors and entrepreneurship through university network
- Knowledge solutions and innovative financing through partnerships

Drivers of Change

Climate Change



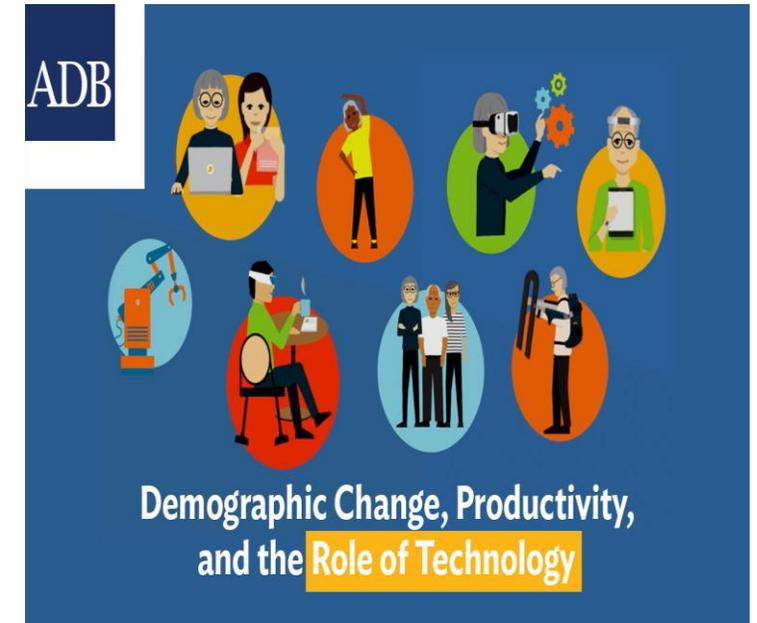
Percent change in GDP compared to baseline

Digitalization



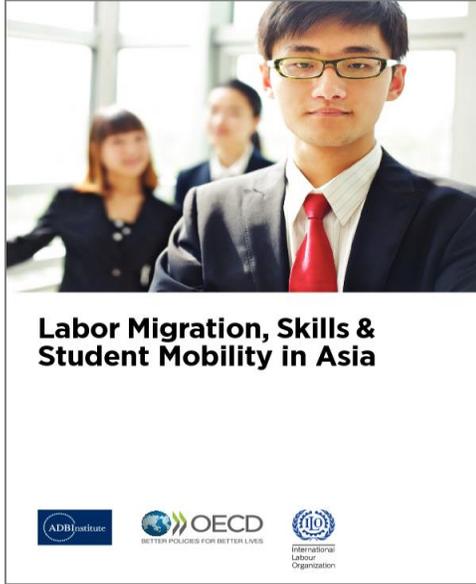
Share of Jobs at Risk of Automation or a Probability of Significant Change

Demographic Change



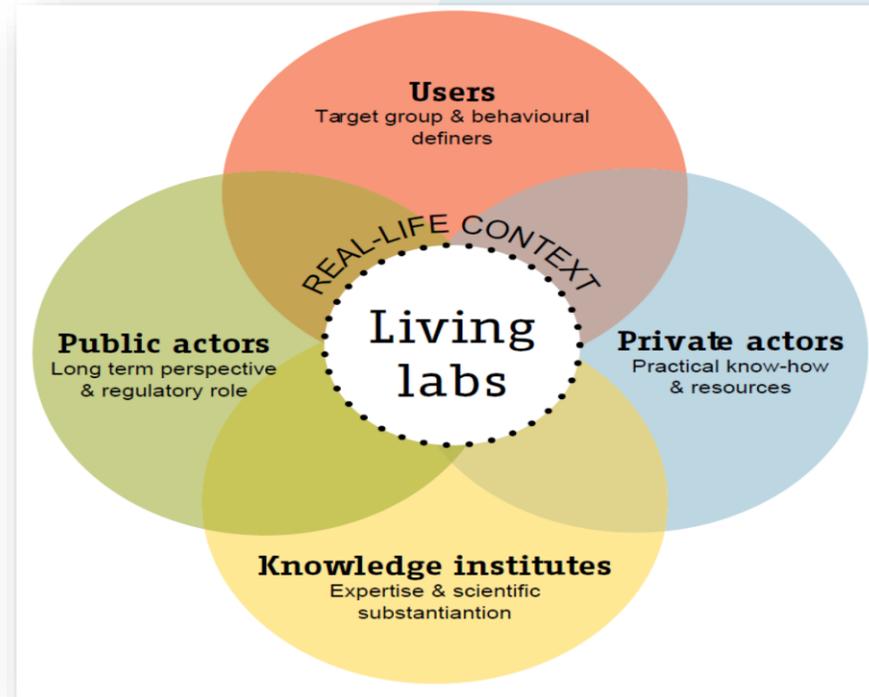
Drivers of Change

Labor Mobility



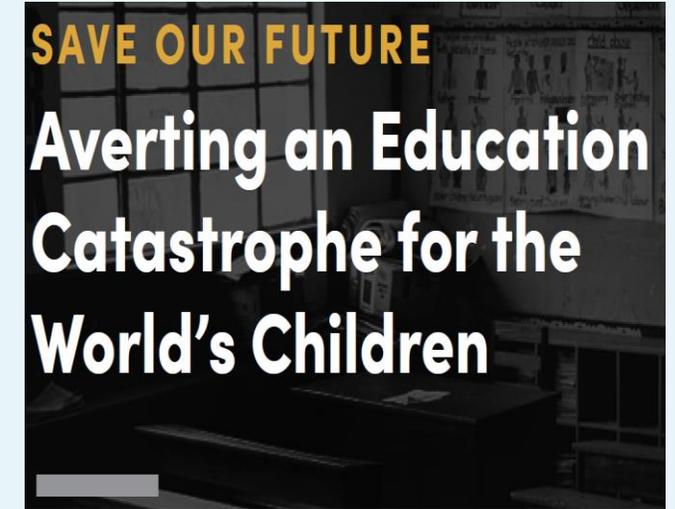
Urbanization

Overview of the stakeholders involved in the Amsterdam Smart City (ASC) living lab



Source: Classifying Pathways for Smart City Development.2020. MDPI

COVID-19 Impact on Education



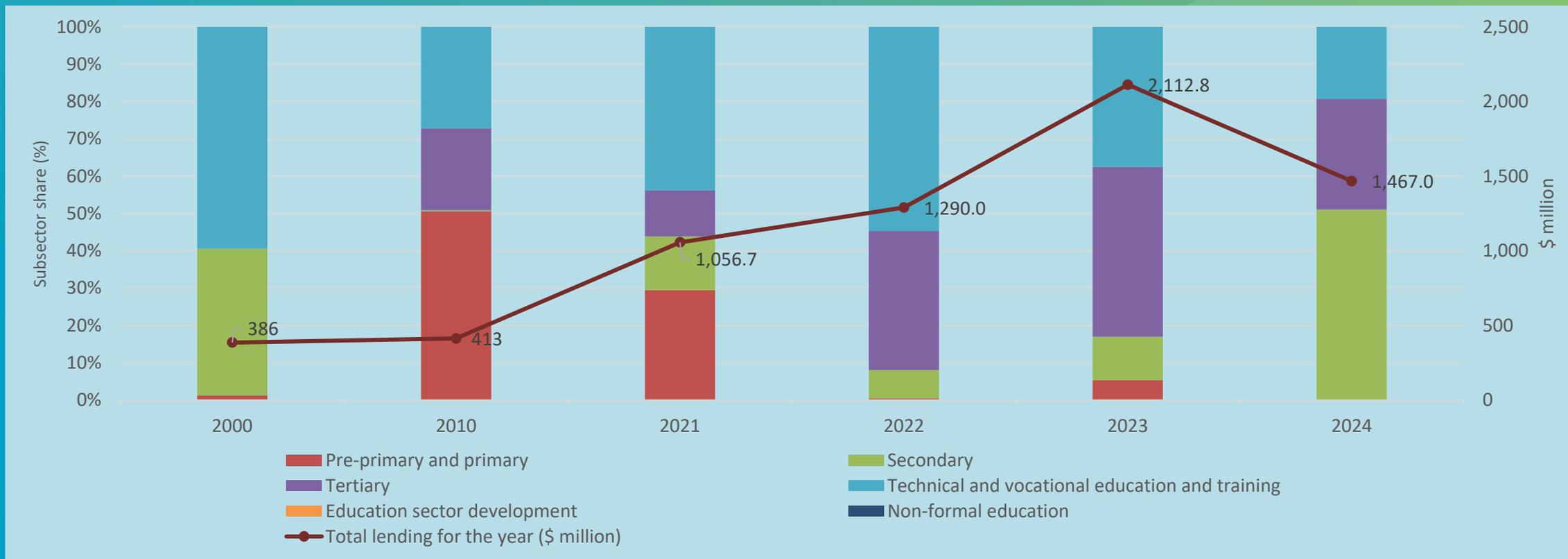
Source: Save our Future campaign.

Emerging Trends in Education

- Foundational learning
- Learning anywhere, anytime
- Balance between formal and lifelong learning (LLL)
- Interdisciplinary and multisectoral: rethinking TVET / higher education
- Innovations: *financing, technology, service delivery*

Trends on Education Lending

EDUCATION BY SUBSECTOR



	Commitments				
	2017	2018	2019	2020	2021
Amount of ADB Lending (\$ million)	711	1,664	1,114	1,091	965
Share in total ADB lending (%)	4%	9%	6%	4%	5%
Number of DMC borrowers (cumulative)	21	21	21	21	22

Lessons from ADB Operations

- Improving access for girls and disadvantaged groups requires multidimensional and better targeting measures.
- Improving quality and relevance requires innovative service delivery, partnerships, and financing.
- Digital learning requires strategic partnerships to scale up learning and equity.
- Enhancing employability and entrepreneurship skills of graduates requires increasing university-TVET-industry collaboration.
- In collaboration with other partners, ADB education team should strengthen its evidence and research base, data, and good practices on what works in DMCs.



Lessons from Finland, Singapore, and South Korea

■ Similarities

- Good school leaders create conducive school environment and good teachers create effective classrooms.
- Quality of teachers is critical and teachers are respected well.
- Low variation across schools: rigorous standards for all
- High quality technical institutions and systems thinking

Finland

Teacher quality
School leadership and autonomy
Decentralized/Public system
Fewer assessments & exams
Extracurricular activities
Less homework
Less number of school days
Low variation across schools

Singapore

Teacher quality
Centralized system
Multiple school choice and pathways
Emphasis on application and thinking
Ability driven / highly competitive
Low variation across schools

South Korea

Teacher quality
Exam is a critical driver
Competitive and hard work
Very high time on task
Private tutoring may be high
High use of technology
Low variation across schools

Lessons Learned from COVID-19

- Digital contents and assessments are not readily available for effective distance learning at such a scale: *it is crucial to simplify curriculum and embed continuous assessment.*
- Much greater attention is needed to access to connectivity and devices, leading to partnerships with telcos: *the digital divide must be addressed urgently.*
- Teachers are not prepared to manage distance learning: *teacher readiness needs rethinking.*
- The focus of learning has shifted from school to home and parents to support learners: *this is critical to boost equity.*
- Education technology (EdTech) solutions that were more confined to private education suddenly got mainstreamed in public education: *blended learning is becoming a new normal.*
- Government policies are critical to apply distance education more systematically: *policies are important to drive reforms.*
- The role of universities is becoming more critical for sustained capacity building: *collaboration and systematic professional development of key players will be critical.*



Source: [Post-covid blended learning photo. Google photos.](#)



Source: World Economic Forum.



**WHERE DO WE WANT
TO GO**



A quality-assured, inclusive education system that ensures learning for all



EXPAND OPERATIONS

- Demand and supply side incentives
- Cross-sectoral collaboration
- Partnerships
- Capacity of education workforce



PROMOTE HUMAN CAPITAL AND SOCIOECONOMIC DEVELOPMENT

- Human capital development
- Whole of government
- Lifecycle approach



INNOVATE

- Quality, relevance, and equity
- Future of skills and jobs
- Municipalities and local governments
- Education technology
- Delivery and financing modalities

Global and Regional Drivers of Change:
climate change, digitalization, demographics, labor mobility, urbanization

Reimagining education for a new normal emanating from COVID-19 monumental impact

Theory of Change

PRINCIPLES

- Align education targets with SDG 4
- Use country-focused differentiated approach
- Promote innovative technology to scale up learning and equity
- Promote sustainable development
- Promote cross-sectoral and integrated solutions

OUTPUTS

- Quality and relevance
- Equitable access
- Education governance
- Education financing and quality spending
- Collaborations and innovations

OUTCOME

- Learning for all
- Employability of graduates improved

IMPACT

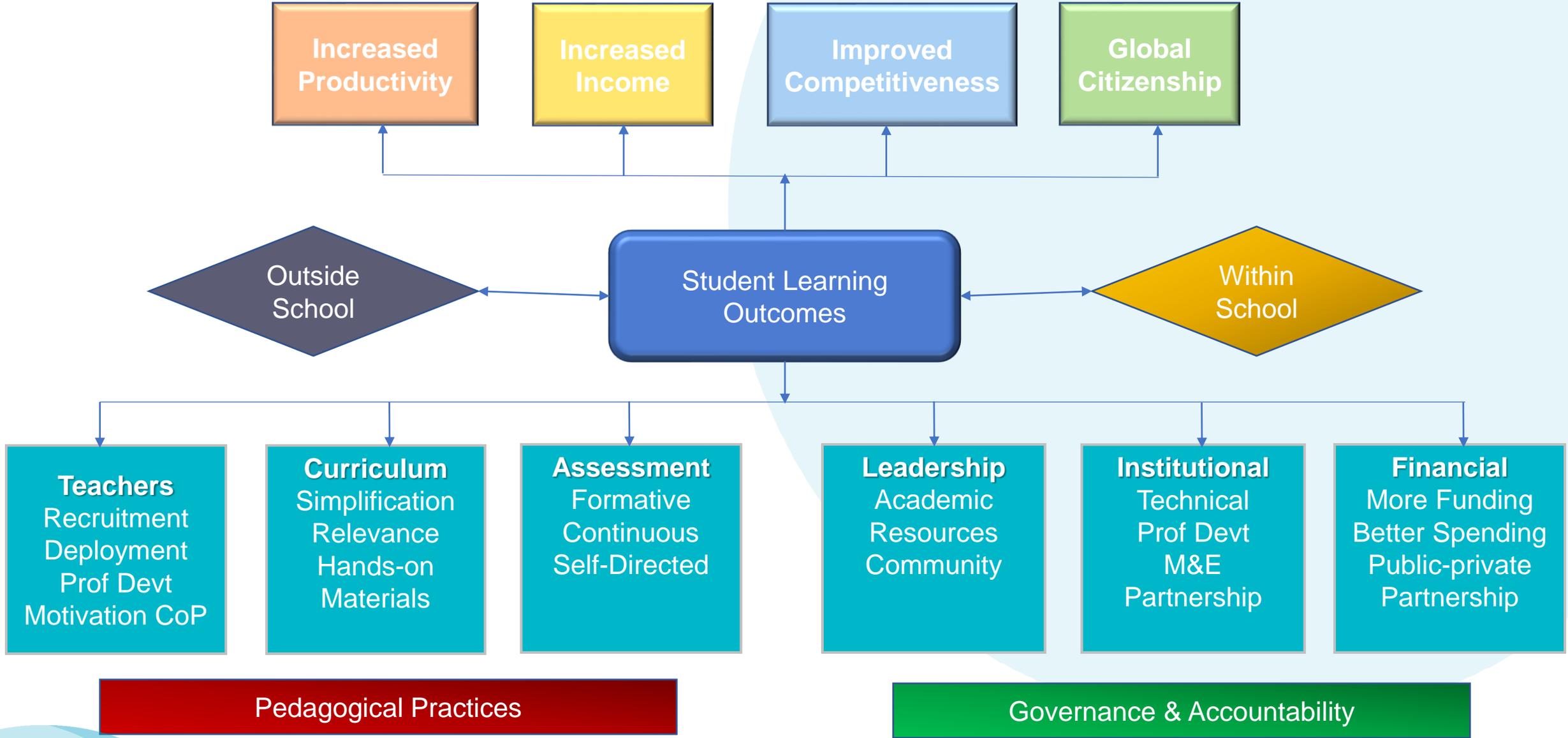
- A quality-assured, inclusive education system that ensures learning for all

**TWO-PRONGED APPROACH:
GOING BACK TO BASICS and TRANSFORMATIONAL**



WHAT WE WANT TO DO

Systems Thinking

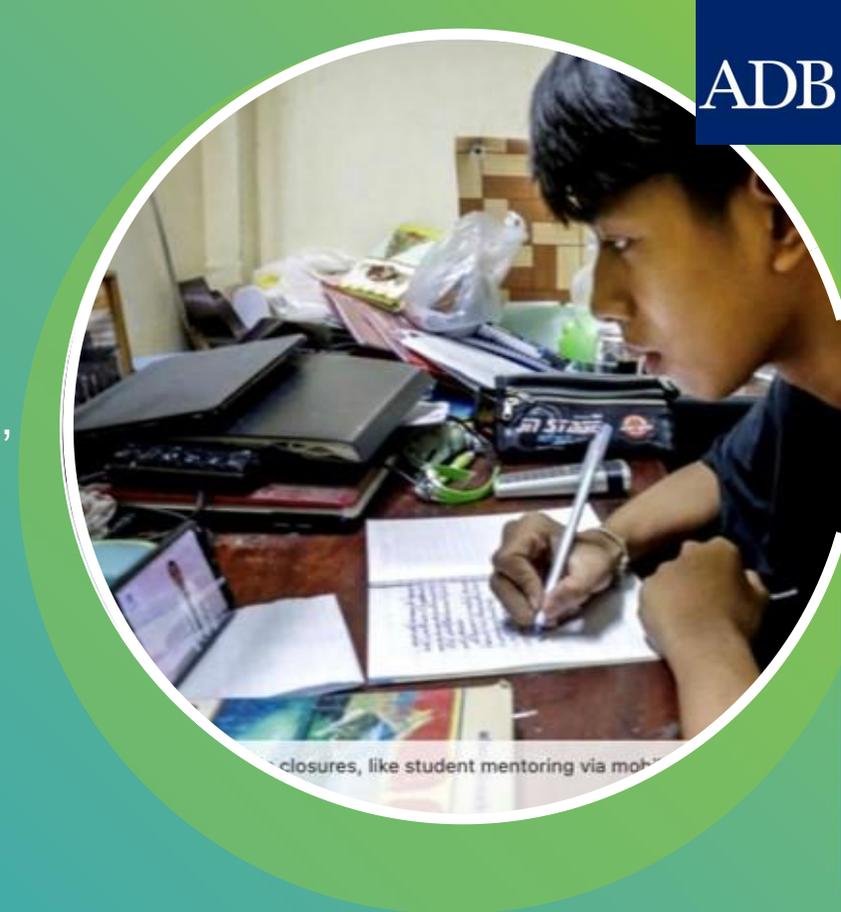


Minimum Viable Education Systems

Long School Closure and Recovery

- Recent ADB study (2022) estimates that earning losses from school closures lead gross domestic product (GDP) to fall globally, amounts to **1.11%**, **\$943 billion in 2030**.
 - In Asia, the effect is deepest in the Kyrgyz Republic (5.5% decline in GDP), Nepal (5.0% decline), Mongolia (4.9% decline), and Bangladesh (4.9% decline)
 - It suggests **Support learning recovery**.
 - i. **Assess level of learning losses** to identify the learning gaps and specific learning needs of individual learners.
 - ii. **Provide effective learning programs** to support lagging students with tutoring or special classes and help them to recover their learning losses.
- [ADB Blog: Asia's Governments Need to Act Now on Scarring Effects of School Closures](#)
- Bangkok Statement (Education Minister's Conference, June 2022)

*“...We are determined that all learners re-engage with and continue their **learning at the right level** and thus prioritize the implementation of learning recovery strategies with a focus on the most vulnerable...”*



Supporting Lagging Students

- Republic of Korea has been running **Diagnose-and-Supplement System of Basic Skills (DASOBS)** since 2008
 - Support lagging students by diagnosing their academic abilities regularly and providing them with supplementary materials through online platform.
 - Continue various diagnostic assessment tests and target learning materials for students below the basic level in grades 1–10.
 - The main intention is to ensure that schools and teachers identify and increase support to vulnerable students.
- The diagnostic test was developed in 2008 and now almost 50% of schools are using this system on a voluntary basis.

ADB publication : [Supporting Lagging Students and Learning for All: Applying the Diagnose-and-Supplement System of Basic Skills in the Republic of Korea](#)

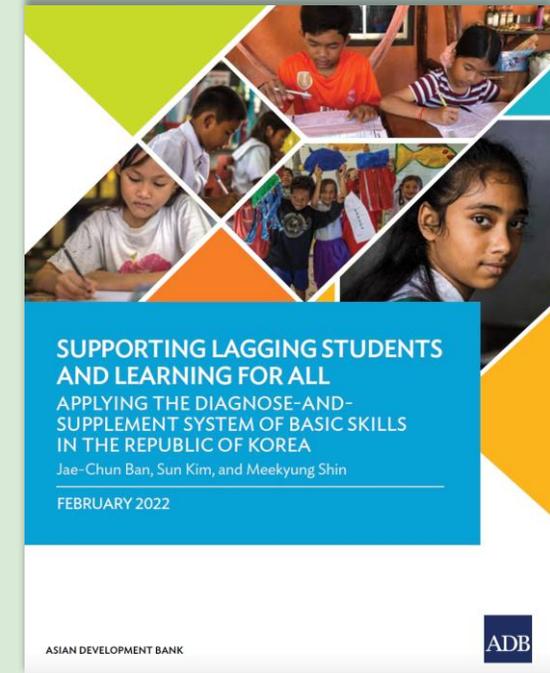


Table 5: Number of Schools that Conducted the DTBS in 2019

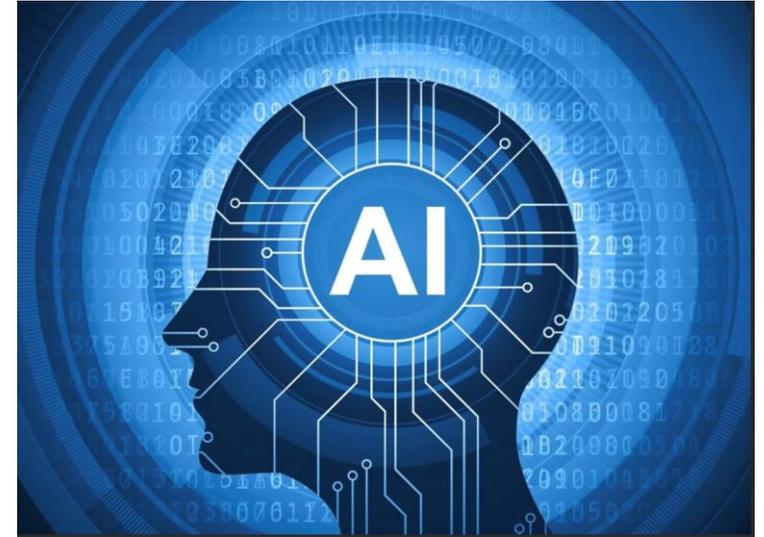
Item	School level	June (Test type A01)	September (Test types A02 and B01)	December (Test types A03, B02, and C01)
Number of registered schools	Elementary	6,468	6,460	6,884
	Middle	3,358	3,347	3,536
	High	2,144	2,146	2,263
	Subtotal	11,970	11,953	12,683
Number of schools that conducted DTBS	Elementary	4,047	3,623	4,033
	Middle	1,818	1,512	1,589
	High	327	296	273
	Subtotal	6,192	5,431	5,895
Percentage of schools that conducted DTBS	Elementary	62.57	56.08	58.59
	Middle	54.14	45.17	44.94
	High	15.25	13.79	12.06
	Subtotal	51.73	45.44	46.48

DTBS = Diagnostic Test for Basic Skills.

Source: Korea Education and Research Information Service.

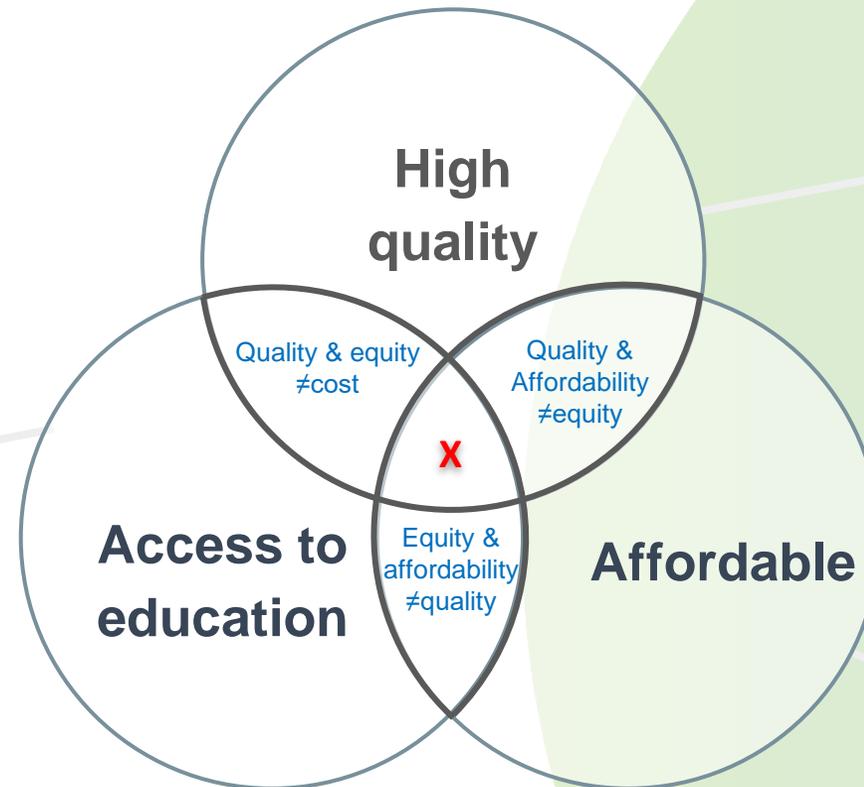
Artificial Intelligence Individualized Education System

- Republic of Korea announces (2022) that it will launch the construction of a new education system using artificial intelligence (AI)
 - Recovering from learning losses during COVID-19 and cultivate talents suitable for Fourth Industrial Revolution society
 - Establishing big data system in public sector for student learning achievement diagnosis system and personalized learning support system using AI technology
 - Achieving zero students below-basic level and improve overall level of learning achievement
- Policies for Cultivating future talents accustomed to AI
 - Starting coding from primary school
 - Mandatory AI related subjects in primary and secondary
 - Introducing AI tutoring in basic subjects in university
 - Encouraging EduTech using AI, virtual reality, and augmented reality



Why Digital Learning and EdTech?

- Significant progress in **access to education**, but the pandemic exacerbated pre-existing learning crisis
- Pandemic spurred the demand for improving **digital access** and reduce widening digital divide



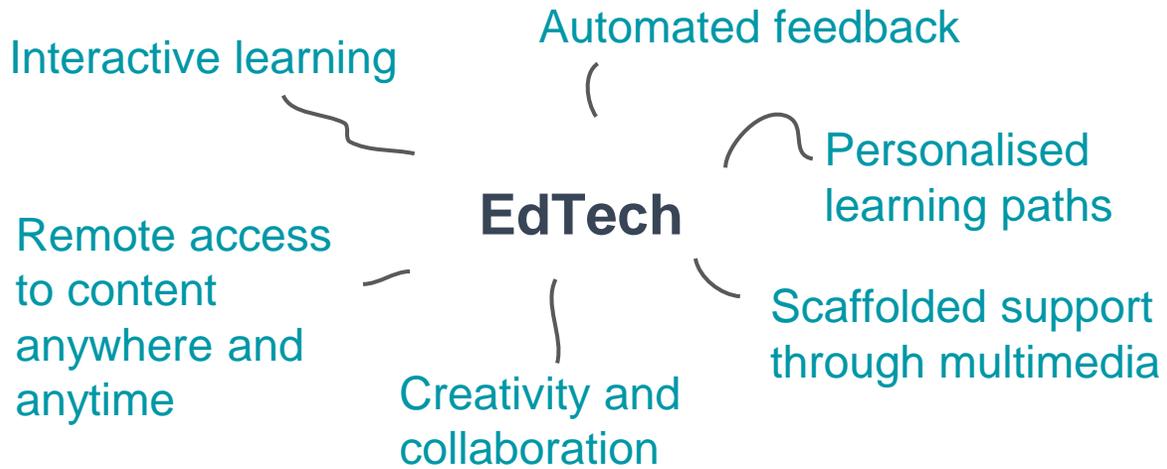
X = EdTech

- Emerging **high quality** EdTech solutions
 - Personalized adaptive learning
 - AR/VR/XR immersive learning
 - Digital credentialing, AI job matching
- How to scale?
- How to make it affordable for developing countries?

AI = artificial intelligence, AR = augmented reality, VR = virtual reality, XR = extended reality

- How to **scale up** the use of low-cost but quality solutions?
 - Open source solutions
 - Low-cost energy efficient devices
 - Online and offline support with efficient connectivity

EdTech to Achieve Quality at Scale



EdTech Empowerment

- If EdTech is used within current school constraints, it is not possible to scale.
- E.g. How can K-12 students use adaptive learning to accelerate learning at progress at expected rate? How can teachers teach at the right level?
- **Tech-Inclusive education system** is needed.

What is Tech-Inclusive Education?

TECH-ASSISTED

Apply technology to existing pedagogy

Operate within school constraints

Impact does not scale

VS

TECH-INCLUSIVE

Context (the challenges of delivering quality education at scale)

+

Purpose (the changing needs and expectations to be met)

=

New practices, which include (but are not determined by) uses of technology

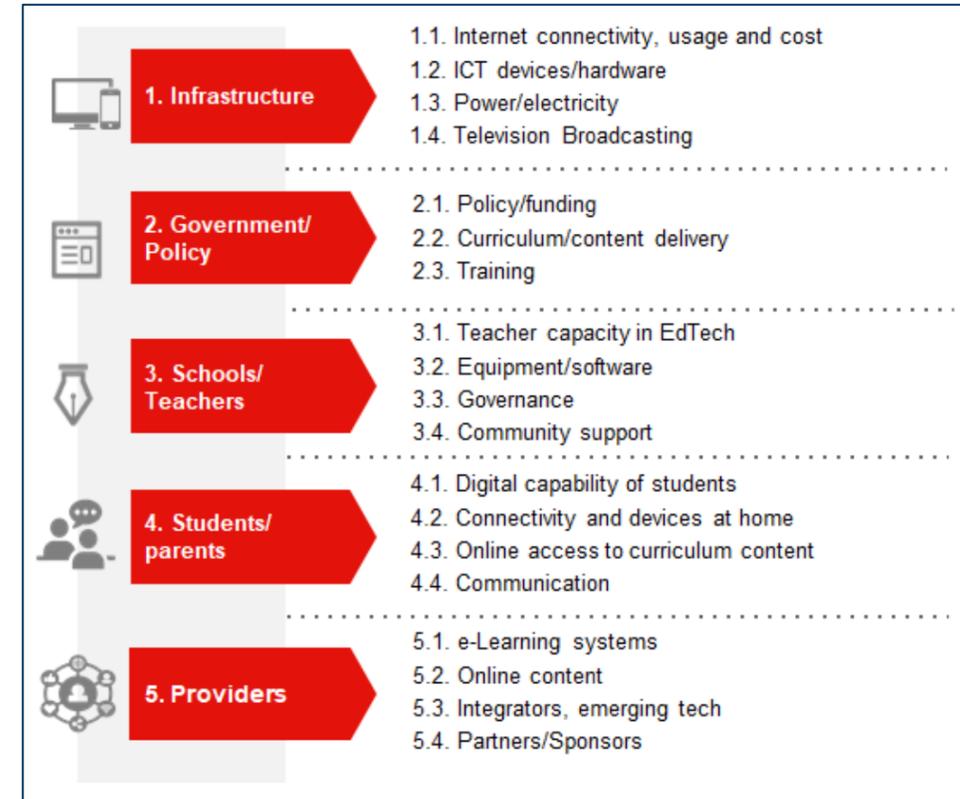
Source: TBI.

How to Transform Into Tech-Inclusive System?

Digital Education Readiness Framework

Minimum Viable Education System (TBI)

Infrastructure	System	Teachers	Learners	Parents/ caregivers
Connectivity	Resource allocation	Recruitment	Skills focus	Engagement
Data management	Accountability	Training	Assessment	
Device access	Decision-making	Support	Content	



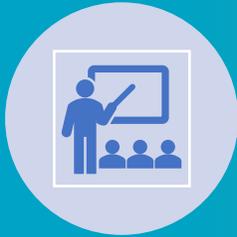
Addressing each area, and developing them iteratively helps in transformation into a tech-inclusive education system.

Minimum Viable Approach means that the development is iterative and it addresses all five pillars before moving to the next tier.

	Tier 1: Low-tech/income (Centralized operations)	Tier 2: Medium-tech/income	Tier 3: High-tech/income (Decentralized operations)
Whole Education system	Improving state's & schools' capacity to execute reform	Continuous TPD & data-based decision making (basing improvements on evidence)	Self-improving schools: rapid experimentation and scaling best practices
Infrastructure	Wifi-in-a-box and offline EdTech	Interoperable cloud systems	Advanced learner analytics
Governance	Centralized (MESO-level) decision making	Autonomy to identify and circulate good tech practices	Autonomic, self-improving tech user schools
Teachers	In-service TDC training	Communities of digital practice	Continuous digital pedagogy training
Learners	Digital fluency skills	Teacher-led, tech enabled personalization	AI-led personalization and interdisciplinary learning
Providers	Use of private EdTech solutions	School-industry partnerships	New EdTech innovations through school-provider co-development

AI = artificial intelligence, TDC = teacher digital competencies, TPD = teacher professional development.

Teacher Quality



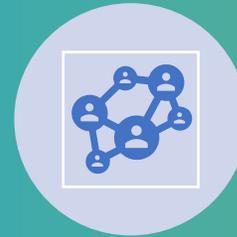
How to attract and deploy bright candidates for teaching?



How to develop them into high quality instructors over the next 10-15 years?



How to motivate them through career opportunities and other incentives?



How to develop a community of practices to facilitate lifelong learning and improvements?

How to support and prepare teachers to scale learning recovery for all?

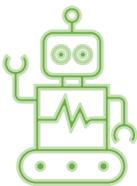
Going Back to the Basics is Fundamental

Four core principles are crucial to address learning poverty/inequity and reduce skills/jobs mismatches



1. Agree on a set of minimum learning conditions

- Quality of teachers and principals
- Simplified curriculum and continuous assessment
- Learner-friendly facilities including use of new technologies



2. Organizational factors to ensure good governance and accountability

- Increase autonomy commensurate with school capacity: staff, curriculum, and funding
- Target lagging students to ensure no one is left behind (robust data and evidence)
- Monitor and report regularly on key performance indicators with an emphasis on learning for all



3. Learner readiness and their home environment

- Support parents/guardians to enable everyone to learn and thrive
- Support health, hygiene, water, sanitation, and nutrition in education institutions
- Find options to support lagging students in partnership with private and civil society organizations



4. Promote knowledge solutions and innovations

- Support evidence-based policy dialogue to foster whole of government and lifecycle approaches
- Promote innovative financing and service delivery models in partnership with the private sector and municipalities
- Rethink capacity development and the role of universities

Transformational Approach Depends on Country's Readiness Linked to Foundational Skills and Overall Readiness

Proposed five main transformative approaches:

- Promote flexible and diverse approaches to respond to emerging labor market and entrepreneurship needs
- Support a comprehensive digital strategy to optimize synergy between human capital and technology
- Promote multi-sectoral and interdisciplinary approaches
- Promote innovative financing and delivery models
- Rethink capacity building and the role of universities and private sector



Priority Areas for Expanding Operations

CLUSTERS	EXAMPLES	STRATEGIC ALIGNMENT
Foundational Learning	<ul style="list-style-type: none"> ECE, literacy/numeracy, digital, and 21st century skills; education workforce; learner friendly and safe school facilities (water, sanitation, health, nutrition) 	<ul style="list-style-type: none"> SDG 4: learning for all, universal secondary education; foundation for lifelong learning
Workforce Development and Entrepreneurship	<ul style="list-style-type: none"> Balance between formal and informal training (lifelong learning): reskilling, upskilling, digital skills/IR4.0 and green skills; models for private sector collaboration including enterprise-based training; prioritize education and health workforce along with other priority sectors 	<ul style="list-style-type: none"> SDG 4: reduce skills mismatches; facilitate quality jobs including shift to formal jobs; use of new generation technology to develop real time labor market intelligence system
Interdisciplinary and Cross-Sectoral Collaboration	<ul style="list-style-type: none"> Education for sustainable development (climate/disaster related); digital transformation; STEAM education; Build for Skills; university network for priority sectors and higher-level future skills / jobs and entrepreneurship 	<ul style="list-style-type: none"> SDG 4/Strategy 2030 priorities (climate change, digital transformation, gender; integrated approaches; partnerships); Global: Build Back Better

BBB = build back better, ECE = early childhood education, IR4.0 = fourth industrial revolution, SDG = sustainable development goal, STEAM = science, technology, engineering, arts, mathematics.

Foundational Learning



IND: State Level School Education
PAK: Social Protection Development Program
PHI: EdTech Solutions for Last Mile Schools
PRC: Early Childhood Education
SOL: Secondary Education
SRI: Secondary School Improvement

TVET



IND: Assam Skills University BAN: Skills for Employment Investment
PHI: TVET Innovation Centers GEO: Modern Skills for Better Jobs

Higher Education



INO: Higher Education for Technology and Innovation
INO: Boosting Productivity through Human Capital Development
BAN: Agriculture University

Human capital intersecting digital/green/others

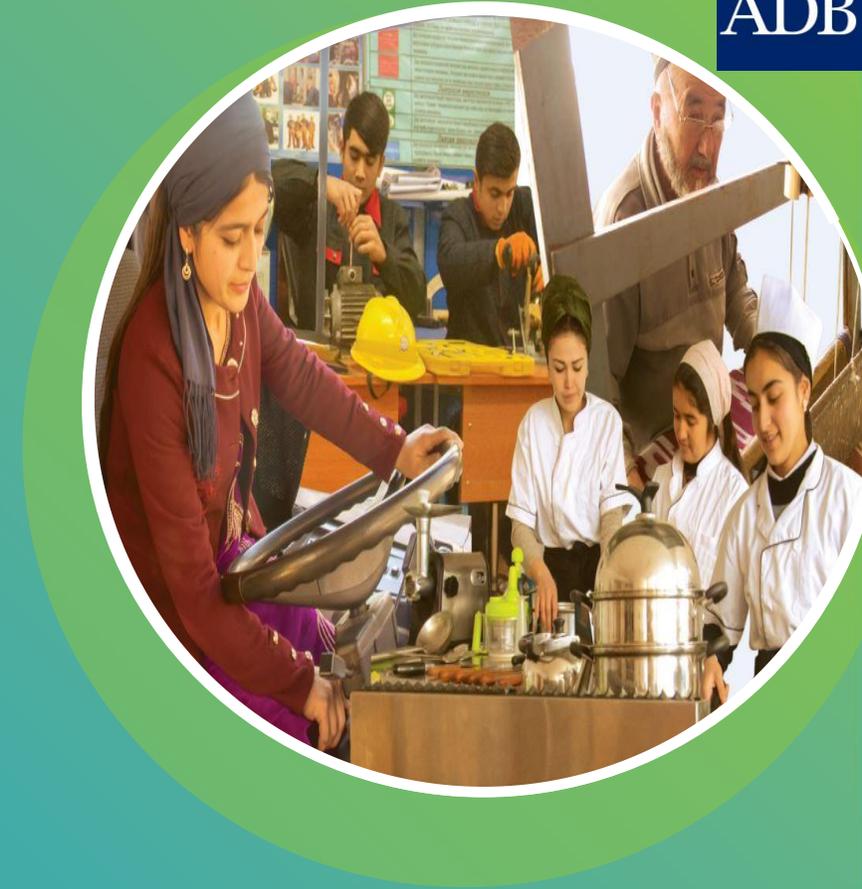


PRC: Urban-Education Projects
IR4.0 Skills: SERD, CWRD
Build for Skills: MON, PAK
COVID-19 (health): INO, LAO, TUK
STEM: CAM, KYG, UZB
Digital Learning

ADB TO PROVIDE 'THOUGHT LEADERSHIP' IN FUTURISTIC DESIGN

What will we do differently? Implementation Actions Highlights

- **Expanded operations with quality.** Redouble efforts to increase lending to the education sector to 6%–10% of its total annual lending by 2024.
- **Integrated approach.** Collaborate with other sector and thematic groups within ADB to catalyze most critical priorities like green and digital skills.
- **Differentiation and efficiency.** Adopt a more balanced approach between country-specific unique projects and common solutions.
- **Innovation.** Pursue innovative financing (e.g., International Finance Facility for Education) and service delivery through strategic and diversified partnerships.
- **Upstream work and knowledge solutions.** Enhance ADB's capacity and approaches for robust upstream work and knowledge solutions.





Thank you!



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