

ADB's Work in Education and Implications for Moving Forward

Brajesh Panth

Chief of Education Sector Group

14 January 2019

The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.

Outline

- Headlines and global trends
- ADB's education portfolio and direction
- ADB's Strategy 2030 and its implications
- Good practices and promising developments
- Moving forward



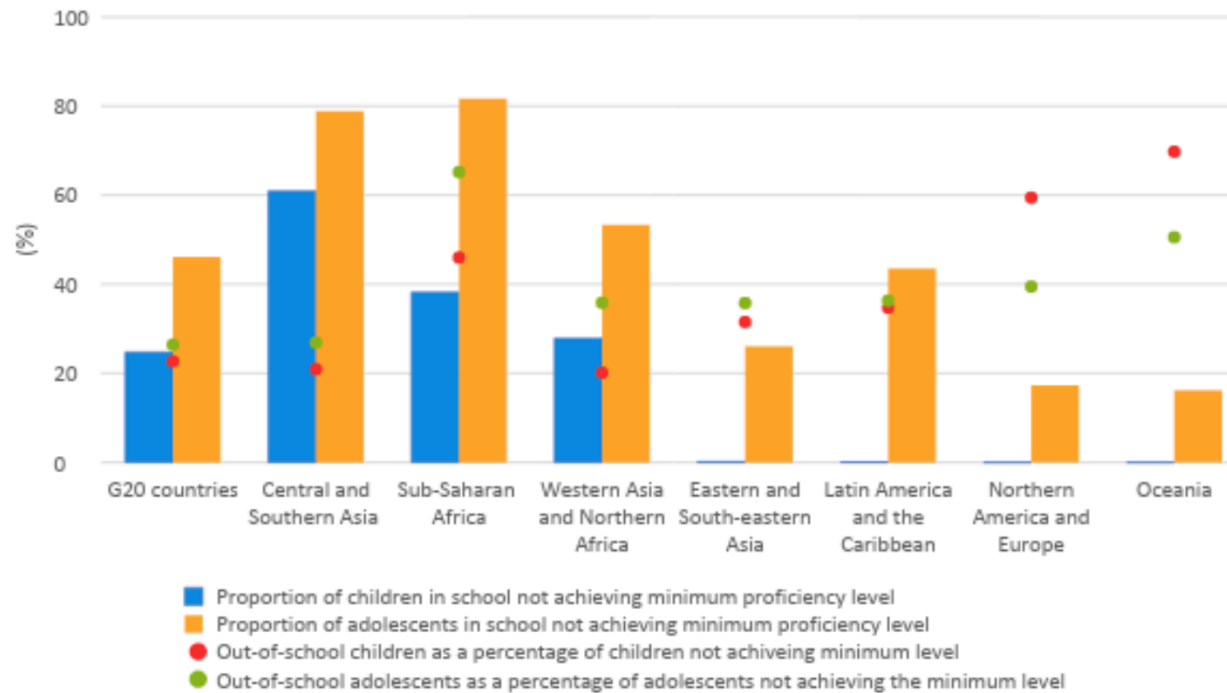
Headlines

There's a global learning crisis and it's leaving millions without basic skills. UNESCO Institute of Statistics, August 2018

World Bank warns of 'learning crisis' in global education. September 2017

Only 4 in 5 school age student in LMICs will learn basic primary skills and 1 in 2 will learn minimum secondary skills. The Learning Generation Report by International Commission on Education

Access has improved but there is crisis in learning and skills mismatches



Source: UIS, June 2018

65% of children in elementary school today will have jobs that do not exist, yet.
U.S. Department of Labor report.

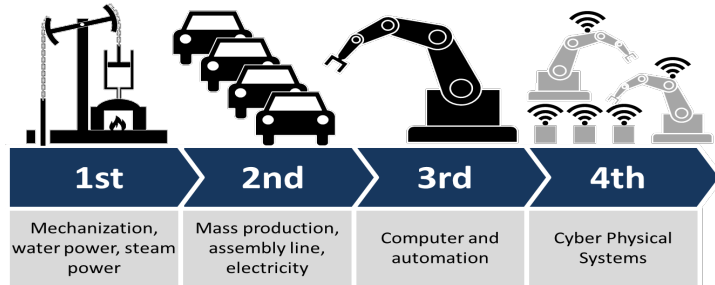
World's Fastest-Growing Economy (India) Isn't Creating Jobs like before due to mismatches between skills and good jobs. Times of India, October 2018

Automation could destroy millions of jobs. We have to deal with it now. The Guardian, August 2018.

400 million to 800 million jobs worldwide could be automated by 2030. McKinsey Report, December 2017.

Global trends

Rapid changes in technology/I4.0



Source: wikipedia

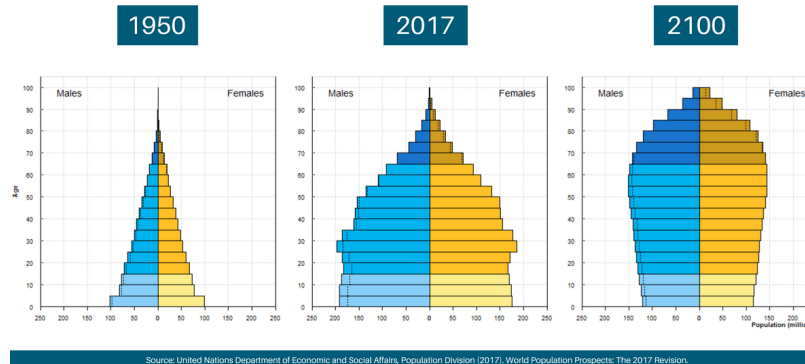
Sustainable development



Source: UN

Demographic changes

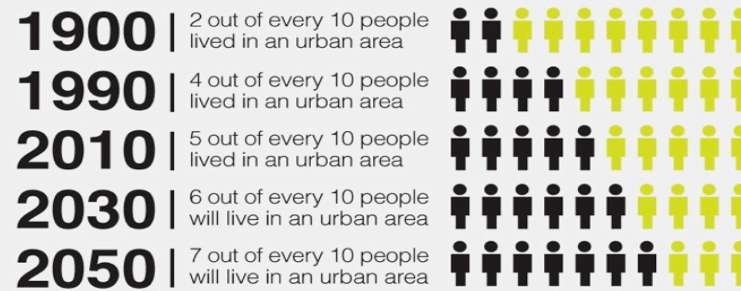
Changes in age pyramids in Asia



Source: UNESCO

Urbanization

Urbanization



Defined by UN HABITAT as a city with a population of more than 10 million
Source: UNESCO

Labor mobility

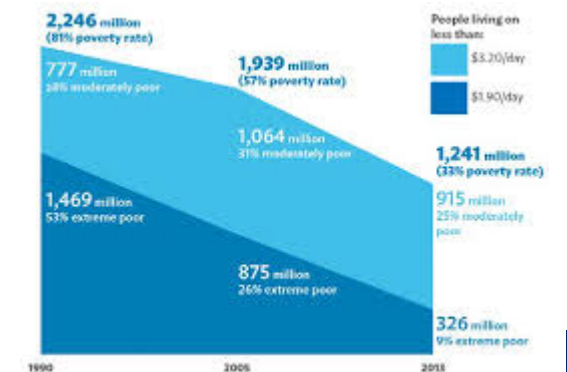
Change in working-age people needed by 2030 to keep dependency ratio at 2016 level
As % of current working-age population

Need immigrants 0-10 10-20 20-30 30+ Have excess workers 0-10 10-20 20-30 30+



Source: Economist

Declining poverty but persistent inequality



Source: WB, PovcalNet

Demographic changes

Figure 1. The changing nature of a career

Length of career



60 to 70 years

Average tenure in a job



4.5 years

Half-life of a learned skill



5 years

Sources: Lynda Gratton and Andrew Scott, *The 100-Year Life: Living and Working in an Age of Longevity* (Bloomsbury, 2016); Douglas Thomas and John Seely Brown, *A New Culture of Learning: Cultivating the Imagination for a World of Constant Change* (CreateSpace, January 4, 2011).

Deloitte University Press | dupress.deloitte.com

Human capital drives innovation

Top scorers in Pisa 2015

Average scores for science, reading and mathematics

Science		Reading		Maths	
Singapore	556	Singapore	535	Singapore	564
Japan	538	Hong Kong	527	Hong Kong	548
Estonia	534	Canada	527	Macau	544
Taiwan	532	Finland	526	Taiwan	542
Finland	531	Ireland	521	Japan	532
Macau	529	Estonia	519	China	531
Canada	528	South Korea	517	South Korea	524
Vietnam	525	Japan	516	Switzerland	521
Hong Kong	523	Norway	513	Estonia	520
China	518	New Zealand	509	Canada	516
Britain	509	Britain	498	Britain	492
US	496	US	497	US	470

NOTE: Chinese students from Beijing, Shanghai, Jiangsu and Guangzhou took part in the Pisa 2015 test.

Source: PISA 2015, OECD STRAITS TIMES GRAPHICS



ecoideaz.com

The global competitiveness index

2016-2017 Rankings

Ranking	Economy	Last year's ranking
1	Switzerland	1
2	Singapore	2
3	United States	3
4	Netherlands	5
5	Germany	4
6	Sweden	9
7	United Kingdom	10
8	Japan	6
9	Hong Kong	7
10	Finland	8
28	China	28

Source: World Economic Forum

SCMP

scmp.com

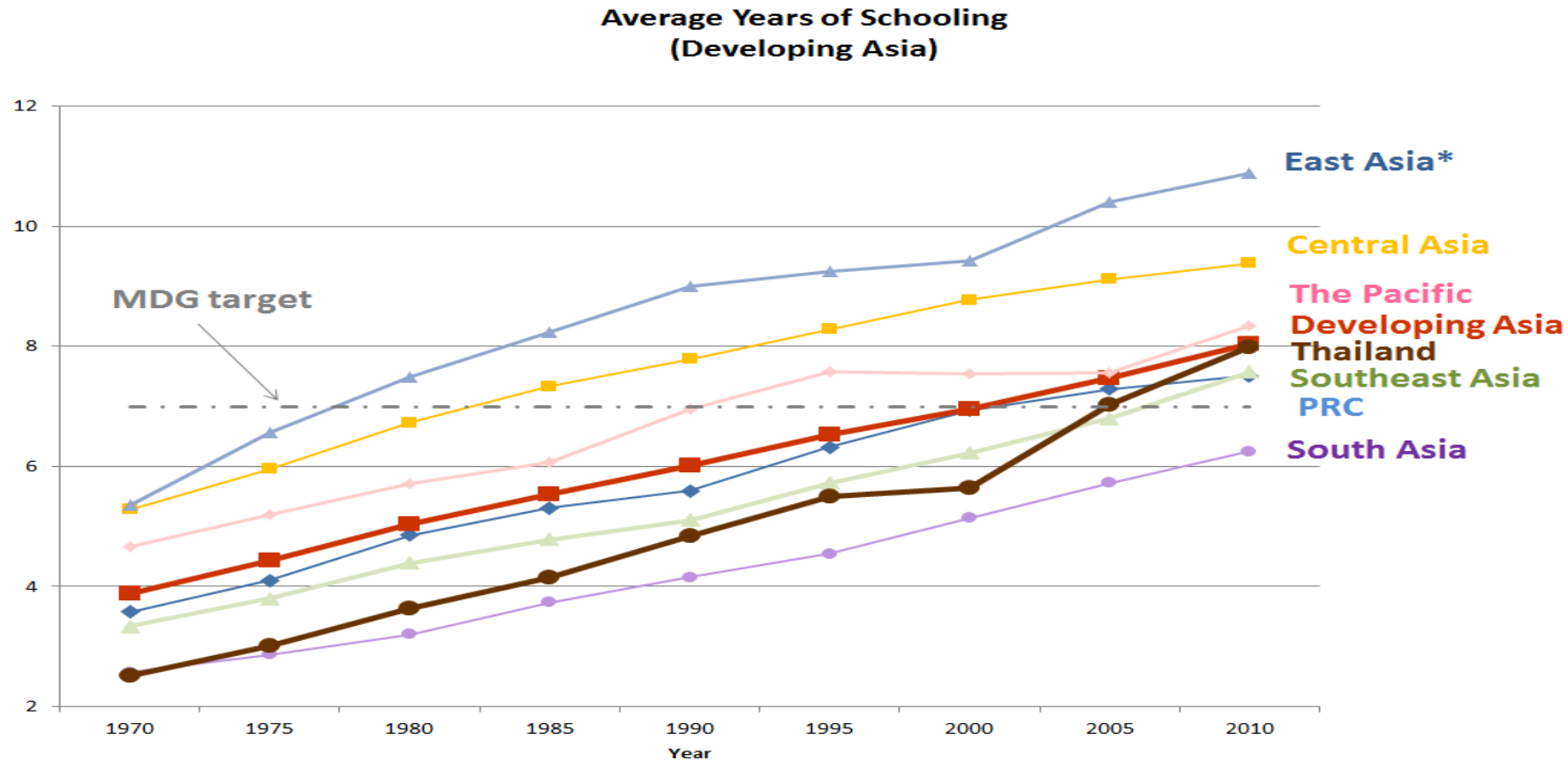


timesofindia.indiatimes.com

Top performing economies companies have the following in common

- They don't have natural resources
- They don't have cheap labor
- But they have top quality human resources that drive innovation

Educational attainment has risen substantially



* Excluding PRC

Source: Barro -Lee website. <http://www.barrolee.com>. (accessed Oct 2015).

Where are we heading

Large inequalities exist, in some cases rising

Developing countries

- Around 100 million school age children in Asia are either not in school or leaving school without learning



Source: gimme.la

Advanced countries

- Fear of robots replacing workers
- Universal income

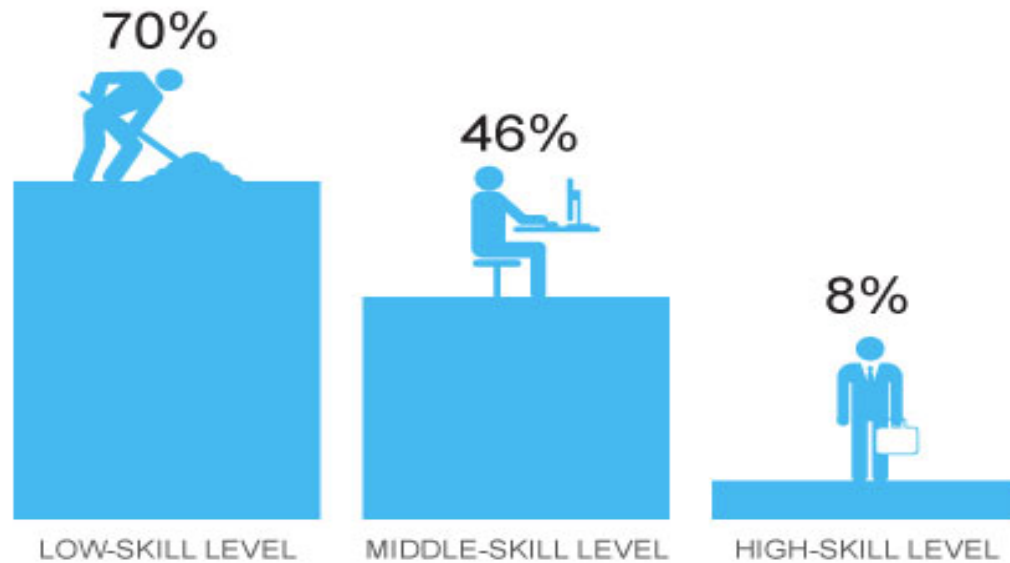


Source: gettingsmart.com

Where are we heading: is automation a threat

Low-skill jobs at greatest risk

Percentage of jobs, by skill level, at a high risk of being automated in 20 years.



Note: Low skill requires no post-secondary education; middle skill requires some college or training; high skill requires a bachelor's degree or higher.

Source USA TODAY analysis of data from Carl Benedikt Frey and Michael A. Osborne, authors of "Future of Employment" and EMSI/CareerBuilder.

Frank Pompa and MaryJo Webster, USA TODAY

economicmodeling.com



JOBS AT RISK OF AUTOMATION

POSITION	PROBABILITY OF AUTOMATION
Loan officers	98%
Receptionists/clerks	96%
Paralegals/legal assistants	94%
Retail salespersons	92%
Taxi drivers/chauffeurs	89%
Security guards	84%
Cooks/fast food	81%
Bartenders	77%
Personal financial advisers	58%
Computer programmers	48%
Reporters/correspondents	11%
Musicians/singers	7.4%
Lawyers	3.5%
Elementary school teachers	0.4%
Physicians/surgeons	0.4%

CBC NEWS

Source: Bloomberg

cbc.ca

Where are we heading

Old School VS. New School

20th Century

21st Century

Time-Based
Textbook-Driven
Passive Learning
Teacher-Centered
Fragmented Curriculum
Printed Assessments
Print
Isolation
Facts & Memorization



Outcome-Based
Research-Driven
Active Learning
Student-Centered
Integrated Curriculum
Multiple Forms of Assess.
Multimedia
Collaboration
Higher-Order Thinking

21st Century Schools, 2010

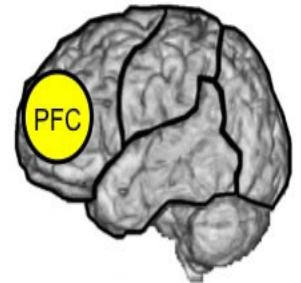
simplek12.com

Hypothesis from Brain Science

The prefrontal cortex plays extremely important roles in keeping our daily life healthy and happy.

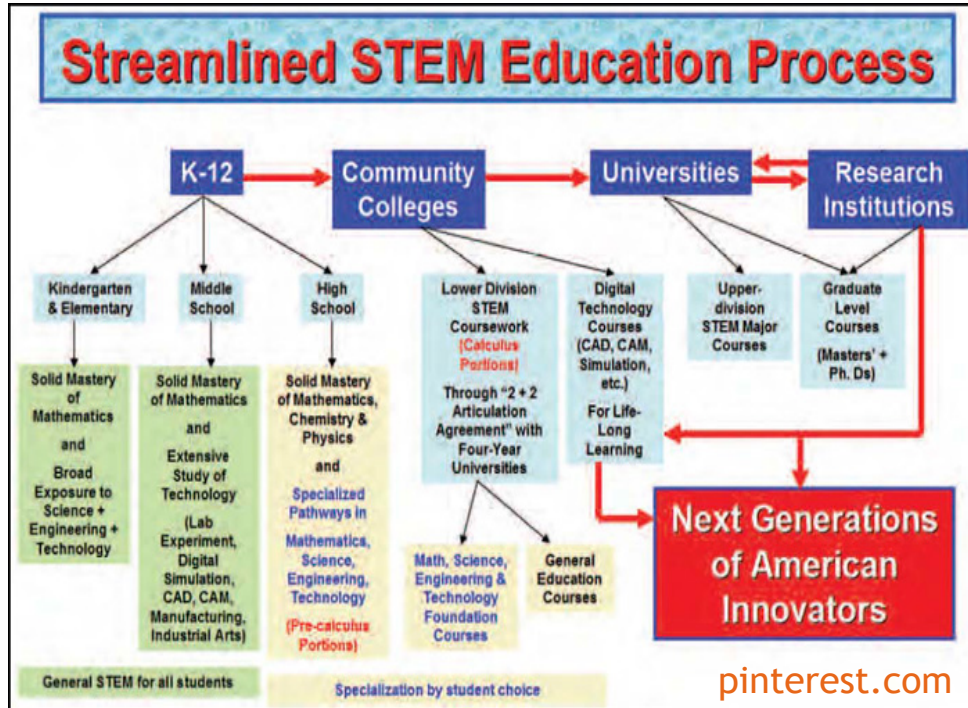
Functions of the Prefrontal Cortex

1. Verbal and non-verbal communication
2. Logical thinking
3. Working memory
4. Control, especially inhibition of behavior
5. Control of emotion
6. Intention
7. Attention
8. Initiation
9. Learning



ww2.idac.tohoku.ac.ai

Where are we heading



Experiential Learning Methods

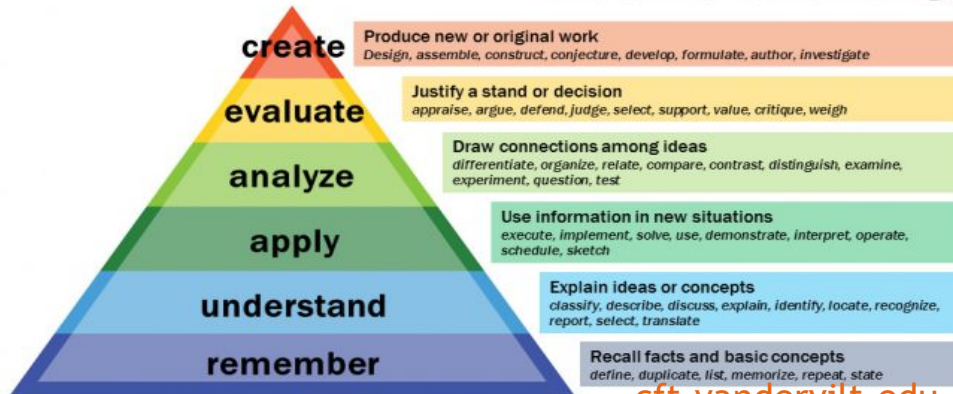
- ✓ Outbound Training
- ✓ Management Games
- ✓ Team Building Activities
- ✓ Adventure Based Learning
- ✓ Outdoor Learning Activities
- ✓ Drama, Art, Theatre
- ✓ Simulation Based Learning
- ✓ Film Making
- ✓ Story Telling
- ✓ Creativity Games
- ✓ Mystery Games
- ✓ Service Learning



[slideshare.net](https://www.slideshare.net)

© Copyright 2015, Outlife. All rights reserved.

Bloom's Taxonomy



Vanderbilt University Center for Teaching

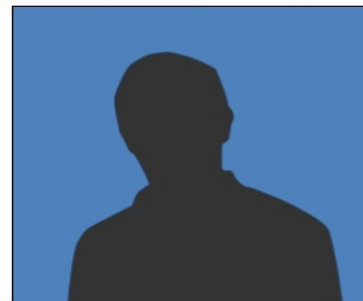
Metacognition

www.dailynews.com

THE TEACHERS' MAGAZINE

-July 28, 2014

Most powerful predictors of learning

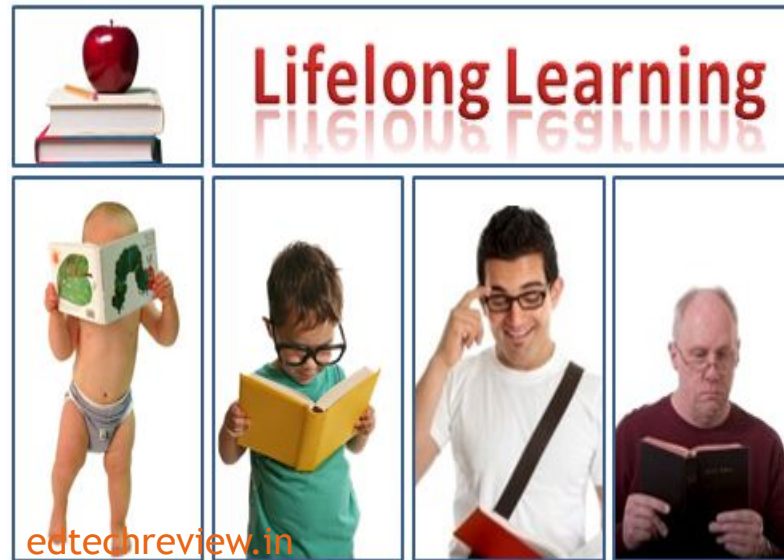
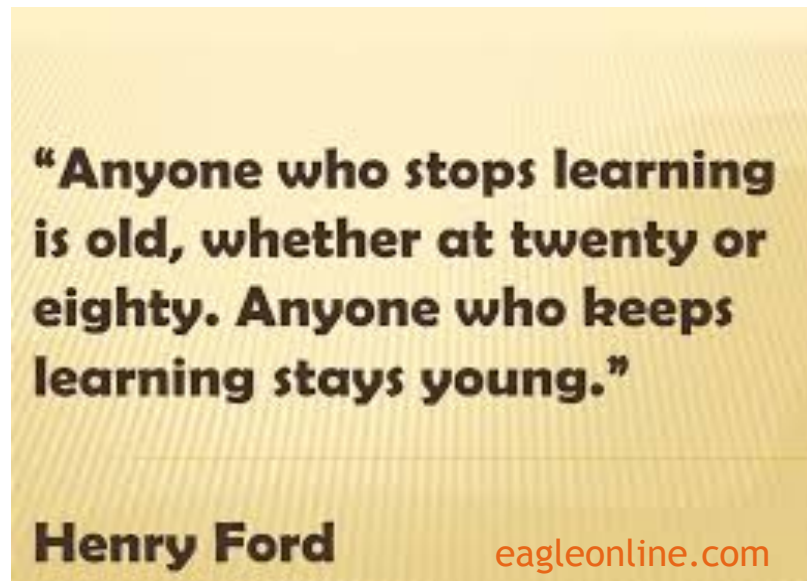
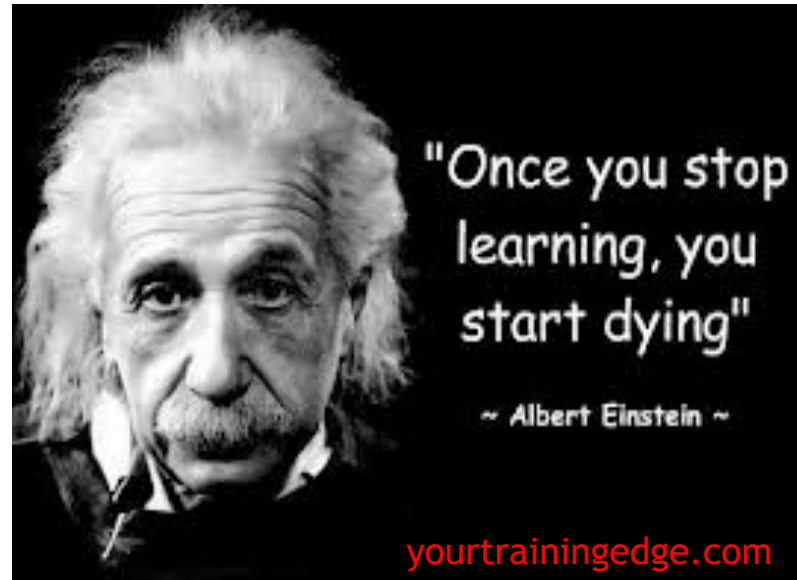
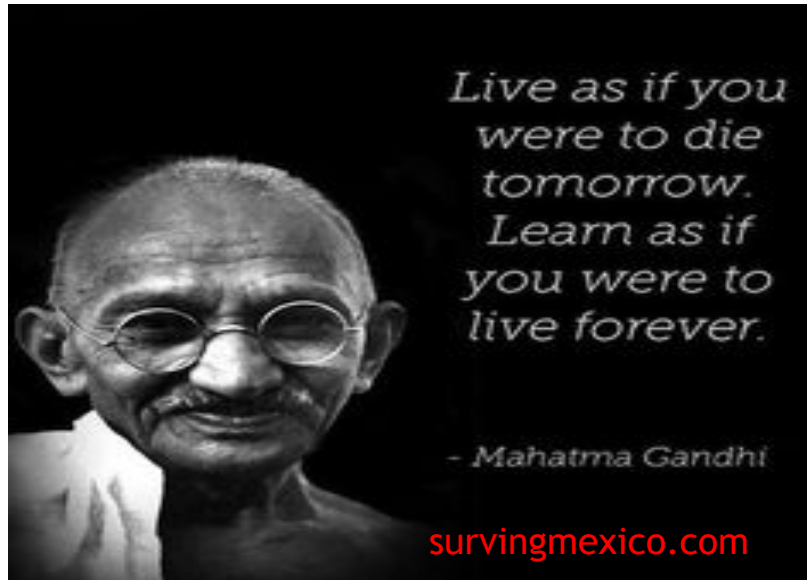


❖ is "thinking about thinking", "knowing what we know" and "what we don't know".

❖ regulates cognitive activity but at the same time needs cognitive activity as vehicle.

[slideshare.net](https://www.slideshare.net)

Lifelong learning is now a reality



Challenges in education

SCHOOL LEVEL

- Despite improved access, millions of students are still out of school and many more are leaving schools without learning
- 21st century skills require better prepared teachers and school leaders
- Lack of career counseling and guidance

TVET LEVEL

- Largely school-based and supply-driven
- Limited involvement of employers and companies
- Lack of focus on soft skills

HIGHER EDUCATION

- Growing enrollment but high graduate unemployment
- Unsatisfactory quality
- Detached from national development

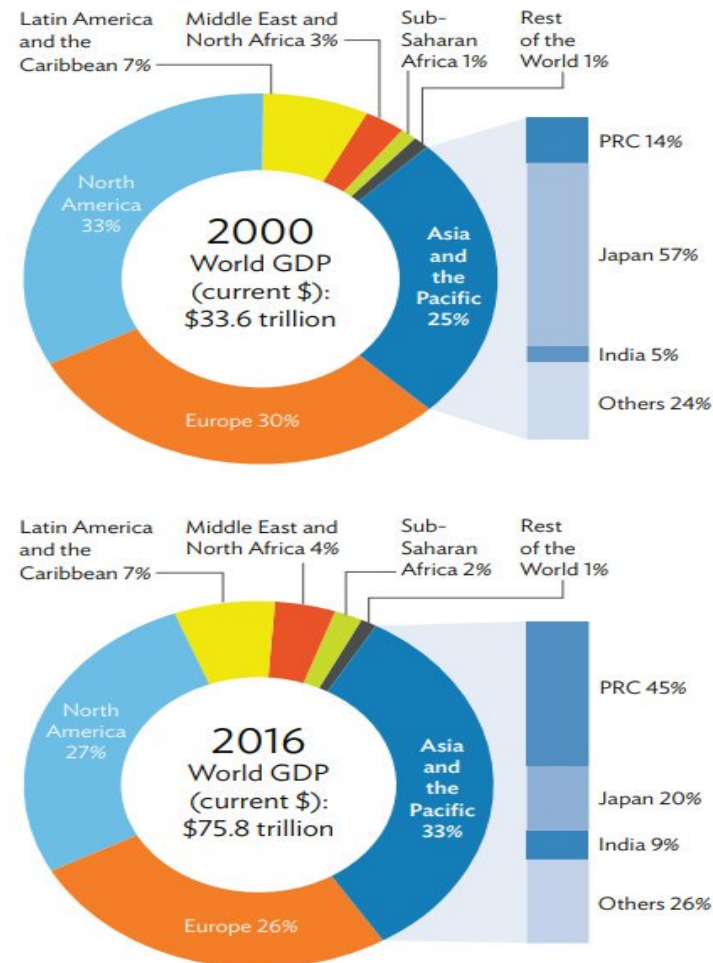
Cross-cutting

- Gender disparity persists
- Limited partnerships between education institutions, industry and employers
- Limited use of technology/digital skills
- Lack of coherent strategy to deal with Industry 4.0

ADB's Strategy 2030 and its implications

- Asia and the Pacific Region becoming an economic powerhouse
- 95% population living in middle income DMCs
- GDP share rises from 25% in 2000 to 33% and expected to grow to 51% by 2050
- Urban population will almost double from 1.6 billion (41%) to 3.1 billion (64%) by 2050— cities will be the centers of higher education, innovation and technological development
- The continuing rapid growth of Asian economies over the next 40 years will require harnessing the full potential of technology, innovation and, critically, entrepreneurship
- In addition to sustaining growth, there is an imperative to promote broader social well-being, self-satisfaction and happiness

Figure 1: Asia and the Pacific's Increasing Share of Global Gross Domestic Product, 2000 and 2016










Source: World Bank. World Development Indicators.

Two scenarios

- Asian century
- Middle-income trap



ADB's Strategy 2030 and its implications

Operational Priorities	Contributions of EdSG
 Addressing remaining poverty and reducing inequalities	<ul style="list-style-type: none">• Promote learning for all• Ensure equity in education leads to higher employability, better jobs and wages• Target support to students in school, TVET and higher education
 Accelerating progress in gender equality	<ul style="list-style-type: none">• Ensure girls' completion of at least quality secondary education and ensure gender parity in enrollment and completion at secondary and post-secondary education• Promote entrepreneurship and job opportunities for women
 Tackling climate change	<ul style="list-style-type: none">• Support Science, Technology, Engineering, and Mathematics (STEM)• Support environment friendly social infrastructure• Support green skills and jobs
 Making cities more livable	<ul style="list-style-type: none">• Promote university-TVET-industry linkages and learning hubs for promoting access to skills for jobs and entrepreneurship, lifelong learning and elderly care
 Promoting rural development and food security	<ul style="list-style-type: none">• Support skills for high tech agriculture and agro-business and elearning to improve economic opportunities for youth while improving agricultural productivity, food security and better health
 Strengthening governance and institutional capacity	<ul style="list-style-type: none">• Invest in institution building and leadership for improved student learning assessments, teacher training, research, and improvements in ICT-enabled governance to enhance the quality and accountability of education sector• Improve sector management to enhance efficiency and effectiveness of education programs
 Fostering regional cooperation and integration	<ul style="list-style-type: none">• Promote mutual recognition of qualification frameworks and benchmarking standards to support borderless workforce, student and labor motility, and knowledge sharing

ADB's Strategy 2030 and its implications: OP1

Major focus of S2030

- Achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific
- Achieving global commitments: SDGs + Paris Agreement on climate change
- Promoting sustainable development through interventions in social sectors and infrastructure
- Using a country focused approach
- Promoting innovative technology
- Delivering integrated solutions (finance, knowledge and partnerships)

Pillars of OP1

Reducing inequality in access to opportunities

Education

- Foundational and soft skills
- Entrepreneurship and leadership skills
- Lifelong learning

Health

- Increasing coverage of health services
- Quality health services
- Regional health security
- Financial risk protection

Social Protection

- Social assistance
- Social insurance
- Labor market program

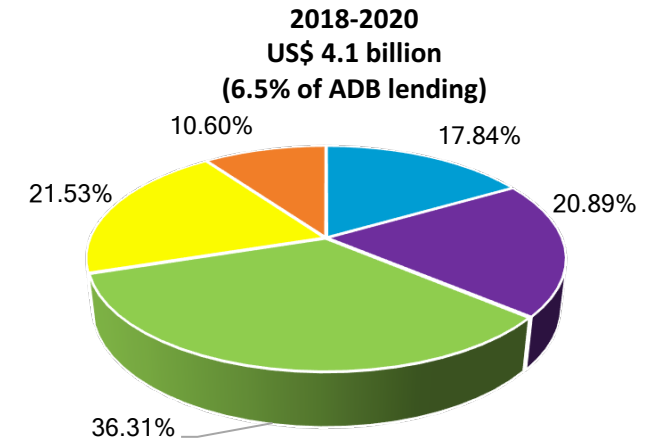
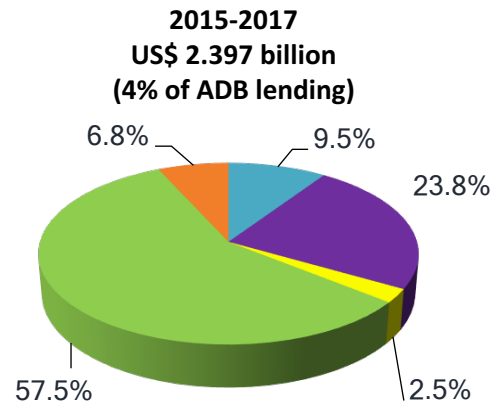
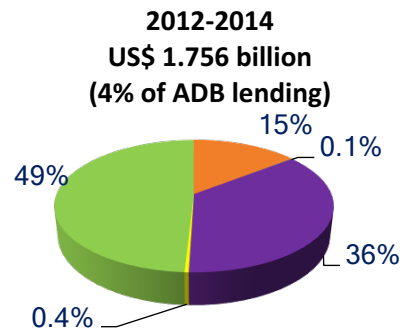
Generating Quality Jobs

- On-the-job training
- Training for infrastructure
- Leveraging technology
- Diversified financing

ADB's education portfolio and direction

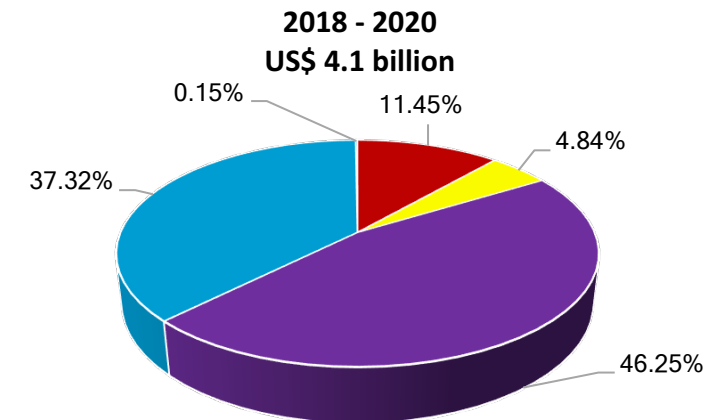
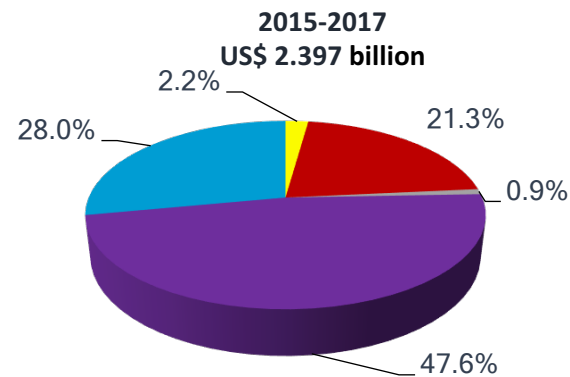
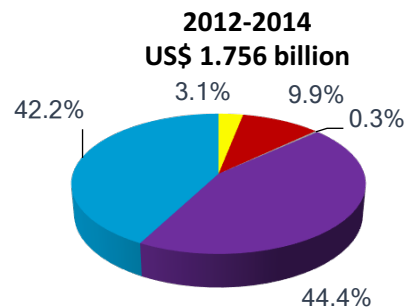
By Subsector

Corporate Target: 6%-10% of Total Lending by 2020



- Pre-Primary and Basic Education
- Higher Education
- Broad Education Sector Development
- Upper Secondary Education
- Technical and Vocational Education and Training

By Region



- Central and West Asia
- East Asia
- Pacific
- South Asia
- Southeast Asia

ADB's portfolio and direction (contextualization and differentiation)

- Currently 23 countries are getting support for education from ADB; this will grow to over 25.
- While South Asia has the highest borrowing, Bangladesh is the largest borrower: the total portfolio is \$1.2 billion. With the new higher education projects in the pipeline, Bangladesh will have projects in all subsectors (K-12, TVET and higher education).
- EdSG has pioneered RBL. There are 8 ongoing RBL in education which have performed well. Three are having follow up RBLs (two in Sri Lanka, Philippines).
- Pacific Region is taking a regional approach where feasible and is exploring ICT platform for the region.
- PRC has demonstrated the feasibility of integrated approach (three approved in 2018).
- Several DMCs (Indonesia, Philippines, Thailand, Viet Nam) in South East Asia are reviewing the implications of Industry 4.0. Indonesia is interested mainly in TVET and higher education. Viet Nam has performed the best in PISA among all the DMCs.
- India and PRC have been borrowing for TVET. PRC has also expressed interest to borrow for early childhood education and practically oriented higher education.
- Several DMCs in CWRD are keen to engage in education. A secondary education project is in advance stage of preparation in Pakistan. There is also preparation for a skills project. Project preparation is underway in Armenia, Georgia and Uzbekistan

ADB's portfolio and direction: Findings of the review of Operational Plan 2020

Successes

- EdSG has pioneered results-based lending
- Organizational structure is stronger (3 social sector-specific divisions)
- Portfolio is getting stronger and more aligned with emerging needs

Challenges

- Lending volume is around 4% since 2013 from around 2% in 2007-2009 but it is still below the corporate target of 6-10% (2018 is an exception)
- Limited progress in ICT, PPP, and RCI (except for PARD)
- Staffing level has lagged behind and needs rethinking

Recommendations

- Adopt a two-pronged strategy (access, quality, and employment; and competitiveness and innovation)
- Establish more diverse partnerships
- Innovate and harness use of ICT, PPP and RCI for scaling quality and impact
- Pool and deploy staff more strategically to address needs of quality, scale and rising expectations of LMICs
- Explore direct support to high growth urban centers

Good practices and promising developments



Source: thinkpalm.com



Source: slideshare.net

NGOs



THE CORE FOUR ELEMENTS OF PERSONALIZED LEARNING



Source: pinterest.com

Big Data for Learning Mgmt



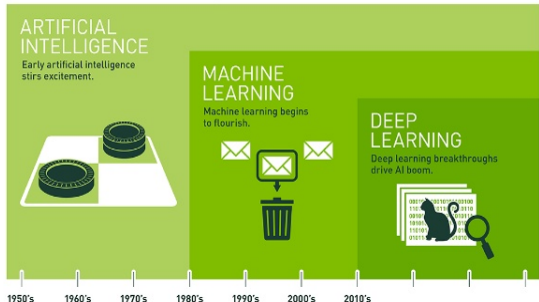
Lessons from Best School Systems

- Attracting top performers for teaching
- Effective professional development
- Ensuring effective instructions for all
- Effective school leaders

Good practices and promising developments

Labor Market Intelligence System

Artificial Intelligence (AI)



source: elearningindustry.com



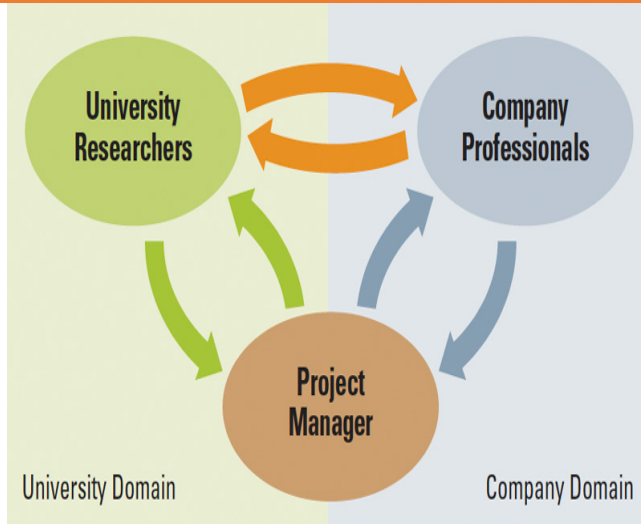
source: sas.com

JobKred

Financing/Vouchers



University-TVET-Industry Linkages



Source: sloanreview.mit.edu

AI/Big Data for Soft Skills



Embedding Training in Infrastructure and other sectors

- **Build for Skills – ADB-BMZ-GIZ collaboration to pilot work-based training in ADB funded urban project in Mongolia**
- **High demand for renewable energy, metro rail, urban devt**

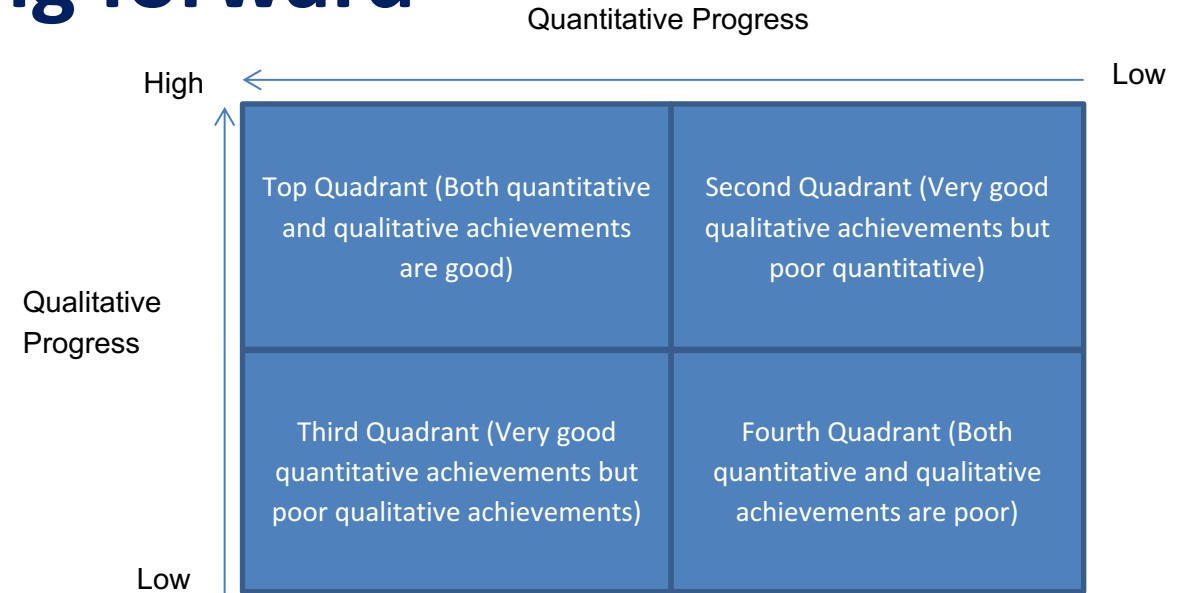
Recent innovative projects in education

Projects	Countries
Large conditional cash transfer programs: education & health	Philippines
Health care human resources project	Viet Nam
Elderly care projects combining education, health, social protection	PRC
Promotion of STEM in upper basic, secondary and higher education	Nepal, Philippines, Sri lanka
Secondary education programs focusing on backward and underserved regions	Cambodia, Viet Nam
Disaster risk resilience and seismic safety in schools	Armenia, Nepal
Yunnan Lincang Border Economic Cooperation Zone Infrastructure Project	PRC
Madhya Pradesh Skills Development Project	India
Advanced Knowledge and Skills for Inclusive Growth	Indonesia

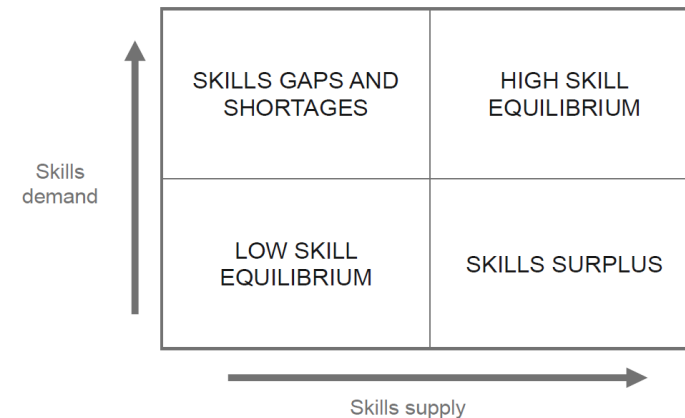
Issues and questions for moving forward



- Given the diversity of ADB’s developing member countries, it is important to contextualize and differentiate strategies to target DMCs and regions
- Take a more standardized approach where needed
- Drawing lessons and feeding into design and knowledge

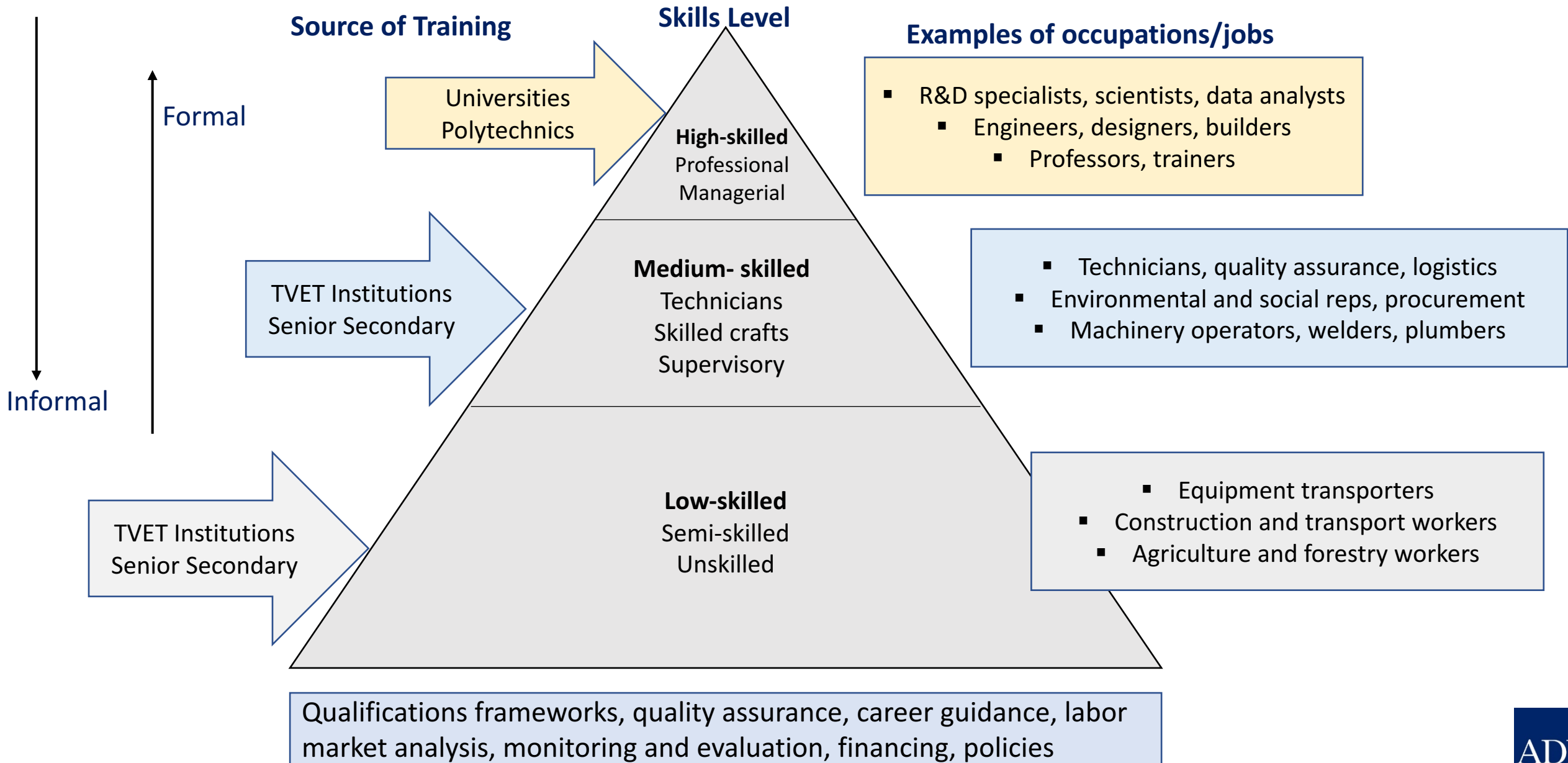


Source: Adapted by ADB Education Group from GMR 2015



Reference: Bureau of Local Employment, Department of Labor and Employment; European Commission, Europe, 2012

Issues and questions for moving forward



Moving forward

▪ Learning for all

- Curriculum, assessment, teachers, principals,
- Students from consumers to co-creators
- STEM education

▪ School level and post secondary TVET

- Work-based training
- Partnership with industry associations/bodies
- Universal digital and soft skills

▪ Higher education

- Strong liberal arts: communications + analytical
- Entrepreneurship and leadership skills
- STEM + big data analytics

- Foundational skills: cognitive, digital and soft skills

- Entrepreneurship and leadership skills

- University-TVET-Industry Linkages
- Incubation centers
- High growth urban centers, IT parks, special economic zone

- Integrated and cross-sectoral collaboration
 - Strong governance and accountability
 - Sustainable financing
 - Strong monitoring and evaluation

▪ Targeting

▪ elearning

▪ Lifelong learning