UNESCO Strategy for TVET (2016-2021)
Outline

- Setting the context
- Drivers for TVET Transformation
- UNESCO Strategy for TVET
- Using ICT in Transforming TVET
I. Setting the Context
2016 – 2030
New Goals for Development

1. NO POVERTY
2. NO HUNGER
3. GOOD HEALTH
4. QUALITY EDUCATION
5. GENDER EQUALITY
6. CLEAN WATER AND SANITATION
7. RENEWABLE ENERGY
8. GOOD JOBS AND ECONOMIC GROWTH
9. INNOVATION AND INFRASTRUCTURE
10. REDUCED INEQUALITIES
11. SUSTAINABLE CITIES AND COMMUNITIES
12. RESPONSIBLE CONSUMPTION
13. CLIMATE ACTION
14. LIFE BELOW WATER
15. LIFE ON LAND
16. PEACE AND JUSTICE
17. PARTNERSHIPS FOR THE GOALS
2016-2030
Education is foundational to the SDGS

Learning

1. No Poverty
2. Zero Hunger
3. Good Health & Well Being
4. Quality Education
5. Gender Equality
6. Clean Water & Sanitation
7. Affordable & Clean Energy
8. Decent Work & Economic Growth
9. Industry, Innovation & Infrastructure
10. Reduced Inequalities
11. Sustainable Cities
12. Responsible Consumption & Production
13. Climate Action
14. Life Below Water
15. Life on Land
16. Peace and Justice
17. Partnerships for the Goals
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
Free and equitable primary and secondary education of good quality

Universal pre-primary education

Ensure relevant skills for employment

Universal literacy and numeracy

More qualified teachers

Make higher education more accessible
Three identified targets:

- Access
- Labour market outcomes
- Equity and gender

TVET contributes to other SDGs including:
- SDG3 (health workforce)
- SDG8 (inclusive growth and decent work),
- SDG9 (infrastructure),
- SDG13 (climate).
Education expenditure: Lower than recommended

**Government expenditure on education as % of GDP (%)**

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>3.06</td>
<td>2009</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>6.78</td>
<td>2013</td>
</tr>
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<td>2011</td>
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<tr>
<td>Tajikistan</td>
<td>4</td>
<td>2012</td>
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<td>Turkmenistan</td>
<td>3.05</td>
<td>2012</td>
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<tr>
<td>Uzbekistan</td>
<td>-</td>
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</tr>
</tbody>
</table>

**Expenditure on secondary and post-secondary non-tertiary vocational as % of govt. total expenditure on education**

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>4.36</td>
<td>2013</td>
</tr>
</tbody>
</table>

Source: (UNESCO-UIS, 2016)
A New Framework for Action

ICT, particularly mobile technology, holds great promise for accelerating progress...

Education 2030
ICT development index (IDI): Lower than CIS average (except Kz)

<table>
<thead>
<tr>
<th>Area/Country</th>
<th>Global rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>58</td>
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<tr>
<td>Kyrgyzstan</td>
<td>97</td>
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<td>Mongolia</td>
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<td>Uzbekistan</td>
<td>-</td>
</tr>
<tr>
<td>Korea</td>
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</table>

Source: (ITU, 2015a)
“To achieve the goal of inclusive and equitable quality education and lifelong learning by 2030, ICT must be harnessed to strengthen education systems, knowledge dissemination, information access, quality and effective learning, and more efficient service provision.”
GLOBAL DIGITAL SNAPSHOT
A SNAPSHOT OF THE WORLD’S KEY DIGITAL STATISTICAL INDICATORS

TOTAL POPULATION
INTERNET USERS
ACTIVE SOCIAL MEDIA USERS
UNIQUE MOBILE USERS
ACTIVE MOBILE SOCIAL USERS

7.395 BILLION
3.419 BILLION
2.307 BILLION
3.790 BILLION
1.968 BILLION

URBANISATION: 54%
 PENETRATION: 46%
 PENETRATION: 31%
 PENETRATION: 51%
 PENETRATION: 27%

FIGURE REPRESENTS TOTAL GLOBAL POPULATION, INCLUDING CHILDREN
FIGURE INCLUDES ACCESS VIA FIXED AND MOBILE CONNECTIONS
FIGURE BASED ON ACTIVE USER ACCOUNTS, NOT UNIQUE INDIVIDUALS
FIGURE REPRESENTS UNIQUE MOBILE PHONE USERS
FIGURE BASED ON ACTIVE USER ACCOUNTS, NOT UNIQUE INDIVIDUALS
INTERNET USE
REGIONAL INTERNET PENETRATION FIGURES

GLOBAL AVERAGE: 46%

NORTH AMERICA: 88%
CENTRAL AMERICA: 44%
SOUTH AMERICA: 60%
AFRICA: 29%
MIDDLE EAST: 53%
SOUTH ASIA: 27%
CENTRAL ASIA: 40%
EAST ASIA: 54%
EAST EUROPE: 64%
OCEANIA: 68%
## Population and development indicators: Significant youth and rural population

<table>
<thead>
<tr>
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<td>2724.9</td>
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<td>29.8</td>
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<td>70</td>
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<td>1564.1</td>
<td>1.8</td>
<td>16.9</td>
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<td>142.6</td>
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<td>10210</td>
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Source: *(UNESCAP, 2015); **(World Bank, 2015)
## ICT Infrastructure Status

<table>
<thead>
<tr>
<th>Area/Country</th>
<th>Mobile-cellular subscriptions per 100 inhabitants (2014)*</th>
<th>Active mobile-broadband subscriptions per 100 inhabitants (2014)*</th>
<th>Fixed-broadband subscriptions per 100 inhabitants (2014)*</th>
<th>Percentage of individuals using the Internet (2014)*</th>
<th>Percentage of households with Internet access (2014)*</th>
<th>Computer-pupil ratio**</th>
<th>Proportion of schools with Internet access (%)**</th>
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</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>168.62</td>
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<td>0.07</td>
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<td>0.04</td>
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<td>40.6</td>
<td>43.9</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: *(ITU, 2015a); **(UNESCOUIS, 2014)
Internet Penetration: Lower Than Average of Developed Countries

Source: (ITU, 2015b)
MOBILE'S SHARE OF WEB TRAFFIC
PERCENTAGE OF ALL GLOBAL WEB PAGES SERVED TO MOBILE PHONES IN JANUARY OF EACH YEAR

- 2009: 0.7%
- 2010: 2.9%
- 2011: 6.1%
- 2012: 10.9%
- 2013: 17.0%
- 2014: 28.9%
- 2015: 33.4%
- 2016: 38.6%
MOBILE'S SHARE OF WEB TRAFFIC
PERCENTAGE OF TOTAL WEB PAGES SERVED TO MOBILE PHONES

NIGERIA: 82%
SOUTH AFRICA: 75%
INDONESIA: 70%
INDIA: 66%
SAUDI ARABIA: 55%
POLAND: 51%
UAE: 49%
MALAYSIA: 47%
TURKEY: 46%
THAILAND: 45%
SINGAPORE: 41%
CHINA: 40%
GLOBAL AVERAGE: 39%
JAPAN: 36%
MEXICO: 34%
SPAIN: 32%
ARGENTINA: 31%
HONG KONG: 29%
PHILIPPINES: 29%
UK: 28%
USA: 27%
AUSTRALIA: 27%
SOUTH KOREA: 26%
BRAZIL: 26%
VIETNAM: 24%
EGYPT: 22%
GERMANY: 22%
ITALY: 21%
FRANCE: 19%
CANADA: 19%
RUSSIA: 12%
Proven Capacity to Help the Poor
Data Revolution Implications
The Digital Economy and Society Index (DESI) is a composite index that summarises relevant indicators on Europe’s digital performance and tracks the evolution of EU Member States in digital competitiveness.

The five dimensions of the DESI

1. Connectivity
   - Fixed Broadband, Mobile Broadband, Broadband speed, and Affordability

2. Human Capital
   - Basic Skills and Usage, Advanced skills and Development

3. Use of Internet
   - Content, Communication and Transactions on line

4. Integration of Digital Technology
   - Business digitization and eCommerce

5. Digital Public Services
   - eGovernment and eHealth

Digital Economy and Society Index (DESI), June 2015

Source: European Commission, Digital Agenda Scoreboard
II. Drivers for TVET Transformation
## EFA Goals Achievement:
### All high EDI (Congratulations!)

<table>
<thead>
<tr>
<th>Area/Country</th>
<th>Goal 1: Early childhood care and education</th>
<th>Goal 2: Universal primary education</th>
<th>Goal 3: Learning needs of all youth and adults</th>
<th>Goal 4: Improving levels of adult literacy</th>
<th>Goal 5: Gender parity in primary and secondary education</th>
<th>Goal 6: Educational quality</th>
<th>EFA Development Index (EDI)</th>
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</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>58</td>
<td>99</td>
<td>100</td>
<td>100</td>
<td>1.01</td>
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<td>0.98</td>
<td>98</td>
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<tr>
<td>World</td>
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<td>89</td>
<td>84</td>
<td>0.97</td>
<td>0.97</td>
<td>75</td>
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</table>

Source: [UNESCO, 2015a](#)
**TVET share of secondary enrolment:**
Low compared to other developed regions

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Kazakhstan</td>
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<td>22</td>
<td>2.13</td>
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<tr>
<td>Turkmenistan</td>
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<td></td>
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<tr>
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<td>542684</td>
<td>58371</td>
<td>10.76</td>
</tr>
</tbody>
</table>

Source: (UNESCO, 2012, p. 364, 370)
## Status of ICT in education policy and teacher ICT competency standards

<table>
<thead>
<tr>
<th>Country</th>
<th>ICT Component in Education Policy</th>
<th>National ICT in Education Masterplan</th>
<th>Teacher ICT Competency Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Existing general/ICT competencies</td>
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<td>Kazakhstan</td>
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<td>✓</td>
<td>▪ General</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ ICT</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>✓</td>
<td></td>
<td>▪ General</td>
</tr>
<tr>
<td>Mongolia</td>
<td>✓</td>
<td></td>
<td>▪ General</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ ICT</td>
</tr>
<tr>
<td>Tajikistan</td>
<td></td>
<td>✓</td>
<td>▪ General (by subject)</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>✓</td>
<td></td>
<td>▪ General</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▪ ICT (in the process)</td>
</tr>
</tbody>
</table>

Source: (UNESCO, 2015b)
Although Asia-Pacific has relatively low youth unemployment rates, it also has some of the highest youth-to-adult unemployment ratios.
Unemployment rates (Overall and Youth): Higher than Asia-Pacific and World Average

Source: (UNESCAP, 2016)
Skills are Important Constraint for Businesses

Source: Enterprise Surveys, 2010

- % unskilled workers, out of all production workers
- % firms identifying labor regulations as a major constraint
- % firms identifying an inadequately educated workforce as a major constraint
Value Added by Sector: Service Sector is Growing Sharply

Value added by sector (% of total value added) in 2003 and 2013

Source: (UNESCAP, 2016)
In Asia Rising Middle Class but Inequality is still Prevalent

Share of employment by economic class*

- The share of ‘extremely poor’ has been reduced, while the proportion of ‘developing middle class’ has increased
- The GINI index has decreased in many countries in Asia-Pacific, but inequality is still prevalent

GINI Index, in selected countries, 2000-2013

A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.


Technological advances can generate new opportunities, but also risks.

Many digitised economies face increasingly polarized labor markets and rising inequality.

Medium-skilled jobs can be at risk from automation.

Need to equip workers with “new skills” to meet demands of the new economy.

Technological advances can generate new opportunities, but also risks.

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Need to equip workers with “new skills” to meet demands of the new economy.


III. UNESCO’S STRATEGY FOR TVET
Changing the Role: Three Analytical Lenses

Source: Marope, M., Chakroun, B. & Holmes, K (2015)
UNESCO: Setting the Norms and Standards in TVET

Normative instruments


Reference Documents

- Transforming TVET: Building skills for work and life. The Shanghai Consensus (2012)
- Qingdao Declaration (2015)
UNESCO Strategy for TVET (2016 – 2021): Support the Efforts of Member States to Enhance the Relevance of Their TVET Systems

Priority Areas

- Fostering Youth Employment and Entrepreneurship
- Promoting Equity and Gender Equality
- Facilitating Transition to Green Economies and Sustainable Societies

Programmes

- Supporting policy reviews and policy development
- Promoting collaborative approaches and capacity building

- Promoting targeted policy measures for disadvantaged groups
- Enhancing women’s and girls’ access to relevant TVET and equal opportunities in the world of work

- Fostering cross-sectoral approaches of TVET
- Promoting green skills for smooth transition to greening economies
- Promoting skills for digitised economies and societies

Source: UNESCO Strategy for TVET (2016-2021)
Anticipating demand for skills

Understanding mobilities and recognising skills and qualifications across borders

Monitoring and evaluating outcomes
IV. Using ICT in Transforming TVET
Fostering Youth Employment and Entrepreneurship

Support Member States in Leveraging ICTs for youth employment and entrepreneurship

Provide support for initiatives that can:

- Significantly change the teachers’ and learners’ roles, practices and performance
- Improve access, equity, learning outcomes, employment and benefits to industry, the community, etc.
- Provide savings and efficiencies
- Are likely to be widely accepted, replicated and supported within the TVET system
Fostering the Promotion of Equity and Gender Equality

Support Member States in Leveraging ICTs for enhancing access to TVET for disadvantaged groups, girls and women:

➢ Map learning strategies fostered by the use of ICTs impact special needs and disadvantaged students,

➢ Identify promising practices in addressing issues related to ICT use for special needs and disadvantaged students through teacher professional development activities,

➢ Examine the promising practices in using ICTs to attract and retain out-of-school and at-risk students (for example, through improved communication and provision of alternative modes of learning)
Anticipating Demand for Skills

➢ Conduct analysis regarding skills requirements for digitized economies and societies

➢ Making use of data analytics to enhance labour market intelligence
Supporting Mobility and Recognition of Skills and Qualifications

- Support student mobility and digitalization of learners records
- The future of Digital Student Data Portability
- Develop approaches for digitised skills passports
Monitoring and Evaluating Outcomes

- Support Member States in developing TVET-MIS
- Making use of data analytics to improve monitoring and evaluation of outcomes
Implementation Modalities

- Leadership capacity development
- Collaboration and networking particularly through UNEVOC Network
- Teaching staff Professional development
- Mapping and sharing resources
- Research and evaluation
UNESCO-COL (forthcoming) - Using ICTs and blended learning in transforming TVET

UNESCO (forthcoming) - Leveraging Digital Technology for Scaling-Up Work-Based Learning to Improve Employment and Entrepreneurship of Youth

UNESCO (forthcoming) - Beyond Access: ICT-enhanced Innovative Pedagogy in TVET

UNESCO-UNEVOC (forthcoming) - Using ICTs for TVET teacher training
References


