Education disrupted – education rebuilt
Covid 19 and the impact on education and training
EfVET Conference – Andreas Schleicher
• **1.5bn** students (and their parents) learned over the last months that learning is not a place but an activity, **work-based learning hit particularly hard**

• **Remote learning** has become the lifeline for learning but doesn’t address the social functions of education and training

• Access, use and quality of **online resources** amplify inequality

• **Accreditation** at stake

• Huge needs for **just-in-time professional development**

• But lots of highly **innovative learning environments** emerging!
Reality of unemployment during pandemic

**Bad Is Unemployment? ‘Literally Off the Charts’**

By Nelson D. Schwartz, Ben Casselman and Eli Koenig
May 8, 2020

The New York Times

Jobs lost in April

Unemployment rate per cent

-20,500,000

Participation rate per cent

CIBC News

Source: Statistics Canada, The Canadian Press

New Covid-19 Layoffs Make Job Reductions Permanent

As companies brace for years of pandemic-related disruption, thousands of furloughed workers are told they won’t be coming back.
Economically difficult times

Retraining needs

• COVID-19 crisis:
  – Limits job mobility and labour migration
  – Made some sectors and occupations non-viable
  – Heightened unemployment, reduced income and increased uncertainty, which has also led social and political unrest

• COVID-19 crisis also:
  – Increased skills demand for some sectors and occupations
  – Gave opportunity to re-build our future economy
Professions with **vocational qualifications** have formed the backbone of economic and social life during the pandemic.
Adults with an upper secondary vocational qualification are more likely to be employed than those with a general one...
...but the employment advantage doesn’t translate into earnings

Figure A4.1

Relative earnings of adults with an upper secondary or post-secondary non-tertiary education compared to earnings of adults with below upper secondary education, (2018)
Quality learning has its price

Figure C1.2

Total expenditure on educational institutions per full-time equivalent student, in vocational and general upper secondary education programmes (2017)
It is the work-based component that increases alignment between education and work, but that the pandemic has put at stake.
Work experience while studying increases employment prospects

Employment rate of 25-34 year-olds who attained vocational upper secondary or post-secondary non-tertiary education, by type of work experience while studying (2016)
However, only one in three VET students participate in combined school- and work-based programmes on average.

Figure B7.6

Distribution of upper secondary vocational students by type of vocational programme (2018)
1. Provide more flexible and resilient vocational training

2. Increase the use of technology in education and training

3. Focus more on training in more future-proof sectors and occupations

4. Enhance broader range of cognitive, social and emotional skills
1. More flexible and resilient means for reskilling

- Vocational education and training, including apprenticeships
  - Allow training breaks, extensions and modularisation.
  - Provide part-time, weekend or online courses and in-company training.
  - Support employers that offer apprenticeships
- Fast-track licensing and recognition of prior learning
  - Direct access to qualification exams
  - Modular training to top-up partially missing skills
- Rapid retraining
  - Essential jobs
  - Targeting workers who already had some relevant skills helped to keep training times short.
    - Short medical training to laid-off workers in the airline industry
    - Retrain hospitality workers to care for the elderly
- Training while on reduced working hours
  - Training while on short term work scheme to improve the viability of their current job or improve the prospect of finding a new job
Using new technologies
Education is still at an early technology adoption stage, with comparatively low market capitalisation.

Sources: HolonIQ, World Health Organization, Goldman Sachs, Standard & Poors. All figures are rounded estimates based on source research.
Global education venture capital

Venture capitalists have invested USD 7B in 2019, up from USD 2B in 2014 – mainly from China.

Source: HolonIQ, January 2019
EdTech expenditure

Advanced Education Technology Expenditure, 2018 and 2025 estimate, USD Billions

Source: HolonIQ, January 2019
New learning experiences

• Many online and distance learning and other innovative approaches such as AR, VR and AI were created, adapted and expanded.
Learning analytics

- Learning analytics helps educators personalise learning
  - in real time
  - as a reflective tool
- Data come from sensors, learning management systems and digital activities of learners
  - When should you shift to a new activity?
  - Are you losing the attention of learners?
  - How do you structure instruction time (lecture, small group, discussion, assessment, practice, etc.)?
  - Which students do you talk to and support the most?
Assessments and exams

New types of assessments through simulations and games
Adaptive assessments
Hands-on assessment in vocational settings
Increasing reliability of machine rating for essays
Predictive models may disrupt the exam model
Blockchain in accreditation

Verification of degrees and credentials

Development of digital degrees

Secure and trustworthy transfer of academic records

Lowers risks of privacy breach (given its decentralised nature)
Reconcile skill demand with individual career aspirations
3. Reconcile skills demand and career aspirations

• Forecasting economic demand requires not just data projection, but also stakeholder engagement
• For the short-term, rapid retraining in essential jobs
• For the long-term, focus more on sectors that have increasing skills demand (mostly higher skilled jobs, such as IT, BT, health and care, green sectors)
• Matching and recruitment support
• Providing career guidance and advice
4. The kind of things that are easy to teach are now easy to automate, digitize or outsource.
TWO EFFECTS OF DIGITALISATION

Non routine tasks

Routine tasks

Tasks without use of ICT

Tasks with use of ICT
TWO EFFECTS OF DIGITALISATION

Non routine tasks, Low use of ICT

Non routine tasks, High use of ICT

Routine tasks, Low use of ICT

Routine tasks, High use of ICT
Education won the race with technology throughout history, but there is no automaticity it will do so in the future.

Inspired by “The race between technology and education” Pr. Goldin & Katz (Harvard)
Skills to manage complex digital information

Young adults (25-34)
Older adults (55-65)

% 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80
ADDITIONAL RETURNS TO SKILLS IN DIGITAL-INTENSIVE INDUSTRIES

Source: OECD Science, Technology and Industry Scoreboard 2017, Statlink: http://dx.doi.org/10.1787/888933617472
See: Grundke et al. (2018), Which skills for the digital era? Returns to skills analysis
ICT USE and NON-ROUTINE INTENSITY ENHANCE FORMS OF LEARNING

EXPECTED EFFECT OF INCREASE FROM 50TH TO 75TH PCTILE OF DIGITAL EXPOSURE ON PROBABILITY OF LEARNING AT LEAST ONCE A WEEK

We used to learn to do the work, now learning is the work
We used to learn to do the work, now learning is the work.

From:

Primary and secondary education

Tertiary: specialise

Job: Same sector

Retire and pension

To:

ECEC

Primary and secondary education

Tertiary: transversal

Job

Job

Job

Job

Job

Adult upskilling and reskilling

age
BUT: LOW-SKILLED ARE LESS LIKELY TO PARTICIPATE IN TRAINING

SHARE OF WORKERS WHO PARTICIPATED IN ON-THE-JOB TRAINING IN THE PREVIOUS YEAR BY EDUCATION LEVEL (%)

Willingness to participate in adult learning is low

Adults not willing to participate, % of 25-64 year-olds, 2012/2015

Firms as learning environments

- How is the additional funding shared between Governments, employers and beneficiaries?
- What are the incentives?
- Who sets the standards?
- How are the levels of skills recognised?
- Who trains the trainers?
The digital transformation expands and diversifies education, training and learning opportunities.

The certification of skills becomes increasingly important: employers need clear signals on workers’ skills.

Firms are increasingly testing skills on their own while relying less on diplomas. How to certify skills and who should be in charge of it?

Preferred option: Independent regulated systems for skills certification?
Governance challenges

• New forms of work: fewer taxes raised
• Ageing societies: higher expenditure in health and pensions
• Decentralised information: less control
• Link between education and jobs weakened: the role of Governments risks been diminished
• Need to predict rapid changes in skills demands and respond to them
Thank you

Find out more about our work at www.oecd.org/education

– All publications
– The complete micro-level database

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