Education students for their future, not our past

AFEKA conference, July 2020
Andreas Schleicher
school closures in response to the Covid-19 crisis
Impact of Covid-19 on education

• 1.7bn students impacted by school closures
• Remote learning has become the lifeline for learning but doesn’t address the social functions of schools
• Access, use and quality of online resources amplifying inequality
• Accreditation at stake
• Huge needs for just-in-time professional development
• Re-prioritisation of curricula and strategies for re-opening of schools needed
• But lots of highly innovative learning environments emerging!
OECD average reading score

- 340
- 350
- 360
- 370
- 380
- 390
- 400
- 410
- 420
- 430
- 440
- 450
- 460
- 470
- 480
- 490
- 500
- 510
- 520
- 530
- 540
- 550
- 560

**Reading literacy in PISA**

- **Student performance**
  - 2000
  - 2003
  - 2006
  - 2009
  - 2012
  - 2015
  - 2018

**Expenditure/student up by > 15%**

- 7%
  - ...can distinguish between fact and opinion, based on implicit cues pertaining to the content or source of the information

- 9%
  - 5.8%
Learning time ≠ learning outcomes

Note: Learning time is based on reports by 15-year-old students in the same country/economy in response to the PISA 2015 questionnaire.
Productivity is measured by score points in reading per hour of total learning time.
When fast gets really fast, being slow to adapt makes education really slow

<table>
<thead>
<tr>
<th>Industrial systems</th>
<th>World class systems</th>
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<tbody>
<tr>
<td>Routine cognitive skills</td>
<td>Curriculum, instruction and assessment</td>
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<td>Complex ways of thinking and working</td>
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<tr>
<td>Some students learn at high levels</td>
<td>Student inclusion</td>
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<td>All students learn at high levels</td>
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<td>Standardisation and compliance</td>
<td>Role of teachers</td>
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<td>High-level professional knowledge workers</td>
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<td>‘Tayloristic’, industrial</td>
<td>Work organisation</td>
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<td>Flat, collegial, entrepreneurial</td>
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<tr>
<td>Primarily to authorities</td>
<td>Accountability</td>
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<td>Primarily to peers and stakeholders</td>
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</table>
Reproducing knowledge
Creating knowledge
Think for yourself and work with others
The kind of things that are easy to teach are now easy to automate, digitize or outsource.
Digitalisation

Democratizing

Particularizing

Empowering

Concentrating

Homogenizing

Disempowering
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)
Fostering creativity in schools: Knowledge

- Disciplinary
- Interdisciplinary
- Epistemic
- Procedural
Fostering creativity in schools: Skills

- Cognitive & meta-cognitive
- Social & emotional
- Physical & practical
Influence of students’ environment – Classroom climate

Cooperative classroom climate is positively related to SE skills

Standardized regression coefficients

-0.05 -0.00 0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40

Cooperative climate 10 yo  Cooperative climate 15 yo
Influence of students’ environment – School bullying

School bullying is negatively related to students’ SE skills

Standardized regression coefficients

-0.25 -0.20 -0.15 -0.10 -0.05 0.00 0.05 0.10


Bullying 10 yo  Bullying 15 yo
Brain sensitivity of important developmental areas

- Language
- Numbers
- Peer social skills
- Emotional control

Age in years

Brain sensitivity

High

Low
Transformative competencies

- Creating new value
- Taking responsibility
- Reconciling tensions & dilemmas
Implications for pedagogy

- Anticipation
- Action
- Reflection
Growth mindset and reading performance

Average reading score

Percentage of students who disagreed or strongly disagreed that their intelligence cannot change very much (%)

OECD average

More students holding a growth mindset

Similar relationship within most countries (Figure III.14.2)
Growth mindset and student attitudes

Change in the following indices when students disagreed or strongly disagreed that "your intelligence is something about you that you can’t change very much":

- Motivation to master tasks
- Self-efficacy
- Fear of failure
- Learning goals
- Value of school

All linear regression models account for students’ and schools’ socio-economic profile.
### Life satisfaction among 15-year-old students

#### Figure III.3.1

<table>
<thead>
<tr>
<th>Country</th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Moderately satisfied</th>
<th>Not satisfied</th>
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**Factors that predict poor life satisfaction:**
- Anxiety with school work
- High internet use

**Factors that predict high life satisfaction:**
- Good teacher support
- Good parental support
- Students who talk or meet with friends after school
- More physical activity
**Students' life satisfaction and school climate**

Change in the school-level index associated with a one-unit increase in the student life-satisfaction scale.

After accounting for student and school characteristics

Before accounting for student and school characteristics

**Fig III.11.7**

Greater Life Satisfaction
Some lessons

• Rigor, focus and coherence
• Remain true to the disciplines
  – but aim at interdisciplinary learning and the capacity of students to see problems through multiple lenses
  – Balance knowledge of disciplines and knowledge about disciplines
• Focus on areas with the highest transfer value
  – Requiring a theory of action for how this transfer value occurs
• Authenticity
  – Thematic, problem-based, project-based, co-creation in conversation
• Some things are caught not taught
  – Immersive learning propositions
Some learn at high levels
All learn at high levels
Poverty need not be destiny
Can the closest school be always the best school?

Variation in reading performance between and within schools.

Performance variation between schools

Performance variation within schools
Few systems align resources with needs

Based on principals’ reports

Index of shortage of education staff

Index of shortage of educational material

Disadvantaged schools have more resources than advantaged schools

Disadvantaged schools have fewer resources than advantaged schools
Against the odds: Growth mindset and student resilience

Fig II.3.5

Difference in the share of academically resilient between those who exhibited a growth mindset and those who did not
Bureaucratic Look-up
Devolved Look-outward
Policy levers to teacher professionalism

Autonomy: Teachers’ decision-making power over their work (teaching content, course offerings, discipline practices)

Peer networks: Opportunities for exchange and support needed to maintain high standards of teaching (participation in induction, mentoring, networks, feedback from direct observations)

Knowledge base for teaching (initial education and incentives for professional development)
Teacher professional collaboration

Percentage of lower secondary teachers who report doing the following activities at least once per month

- Discuss individual students
- Share resources
- Team conferences
- Collaborate for common standards
- Team teaching
- Collaborative PD
- Joint activities
- Classroom observations

Exchange and co-ordination

Professional collaboration

Percentage of teachers
Teachers’ self-efficacy and professional collaboration

- Teach jointly as a team in the same class
- Observe other teachers’ classes and provide feedback
- Engage in joint activities across different classes
- Take part in collaborative professional learning

Teacher self-efficacy (level)

Less frequently

More frequently

Never
Once a year or less
2-4 times a year
5-10 times a year
1-3 times a month
Once a week or more
Teacher job satisfaction and professionalism

Perceptions of teachers’ status
Satisfaction with the profession
Satisfaction with the work environment
Teachers’ self-efficacy

Low professionalism
High professionalism

Figures:
- Figure 1: Perceptions of teacher status
- Figure 2: Satisfaction with the profession
- Figure 3: Satisfaction with the work environment
- Figure 4: Teachers’ self-efficacy
Prescription
Ownership of professional practice

Powerful learning environments are constantly creating synergies and finding new ways to enhance professional, social and cultural capital with others. They do that with families and communities, with higher education, with other schools and learning environments, and with businesses.
Who decides?
Percentage of decisions taken at each level of government in public lower secondary education (2017)
### Correlations between the responsibilities for school governance and learning outcomes

<table>
<thead>
<tr>
<th></th>
<th>School principal</th>
<th>Teachers</th>
<th>School governing board</th>
<th>Local or regional education authority</th>
<th>National education authority</th>
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<tbody>
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<td>Resources</td>
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<td>Curriculum</td>
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<td>Disciplinary policies</td>
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<td>Assessment policies</td>
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<td>Admissions policies</td>
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</table>

Source: OECD, PISA 2015 Database.

PISA Figure II.4.8
The past was divided

Teachers and content divided by subjects and student destinations

Schools designed to keep students inside, and the rest of the world outside
The future is integrated

Integrated: Emphasising integration of subjects, integration of students and integration of learning contexts
Connected: with real-world contexts, and permeable to the rich resources in the community
Less subject-based, more project-based
Parents’ interest in their child’s activities at school and well-being (average)

Students who say their parents are interested in their school activities are more likely to:

- Want top grades at school: 2.5 times more likely
- Be very satisfied with life: 1.9 times more likely

Students who say their parents are interested in their school activities are less likely to:

- Feel lonely at school: 1.4 times less likely
- Not be satisfied with life: Twice less likely

As likely: None
Ideosyncratic policy
Alignment of policies
Changing education can be like moving graveyards

• The status quo has many protectors
  – Everyone supports reform – except for their own children
  – Even those who promote reforms often change their mind when they understand what change entails for them
  – The slow-building crisis

• The frogs rarely clear the swamp
  – The loss of privilege is pervasive because of the extent of vested interests
  – Teachers can easily undermine reforms during implementation, while blaming policy makers for having attempted misguided reforms
  – Even when parents have a poor opinion of the education system, they will generally view the school of their children and its teachers positively

• Asymmetry of costs and benefits of educational reform
  – Costs are certain and immediate, benefits are uncertain and long-term
Changing education can be like moving graveyards

• Complex governance
  – Many layers, many stakeholders
  – Changes in the demands in our societies have vastly outpaced the structural capacity of our current governance systems to respond

• Lack of supportive ecosystems
  – Lack of an ‘education industry’ that pushes innovation and absorbs risks
  – A research sector that is often disengaged from the real needs of real classrooms

• You can lose an election but you don’t win one over education
  – Complexity and length of reform trajectory that extend electoral cycles
  – A substantial gap between the time when the cost of reform is incurred, and the time when benefits materialise
Making change happen

Knowledge is only as valuable as our capacity to act on it, and the road of educational reform is littered with good ideas that were poorly implemented.
Programmes do not scale; it is culture that scales, and culture is the hallmark of effective leadership. Culture is about system learning, system-wide innovation, and purposeful collaboration.

To achieve transformative change, don’t ask yourself how many of your staff support your ideas, ask yourself how well your staff can collaborate.
Strive for consensus about the aims without compromising the drive for improvement

Looking outward

Careful timing

Careful piloting

Engage stakeholders

Strive for consensus

The laws, regulations, structures and institutions on which reform tends to focus are just like the small visible tip of a huge iceberg. Educational leaders are rarely successful with reform unless they build a shared understanding and collective ownership for change, and unless they build capacity and create the right policy climate, with accountability measures designed to encourage innovation rather than compliance.

Acknowledge divergent views and interests

Communicate, communicate, communicate

Feedback reduces the likelihood of strong opposition

Involvement of stakeholders cultivates a sense of joint ownership over policies, and hence helps build consensus over both the need and the relevance of reforms.
Successful implementation of long-term aims

Where teachers are not genuinely involved in the design of reforms, they are unlikely to help with their implementation.

Policy makers don't always have a good sense of the capacity and expertise that is dormant among their teachers, because too much of their efforts focuses on getting government prescription into classrooms, and too little on getting good practice from great classrooms into the education system.
Successful implementation of long-term aims

Policy experimentation can help build consensus on implementation and can prove powerful in testing out policy initiatives and – by virtue of their temporary nature and limited scope – overcoming fears and resistance by specific groups of stakeholders.

Individuals and groups are more likely to accept changes that are not necessarily in their own interests if they and society at large understand the reasons for these changes and can see the role they should play within the broad strategy.
Successful implementation of long-term aims

- Strive for consensus
- Engage stakeholders
- Careful piloting
- Sustainable resources
- Careful timing
- Looking outward

Often the resource implications of reform are underestimated in scope, nature and timing. The main shortcoming is often not a lack of financial resources, but a dearth of human capacity at every level of the system.

Build capacity
A week is a long time for a political leader, but successful education reform often takes years. Certain reform measures are best introduced before others, particularly because of the substantial gap between the time at which the initial cost of reform is incurred, and the time when the intended benefits of reforms materialise.

Fixing things late is generally more expensive than nudging them on to the right path early.

Time is needed to learn about and understand impact, to build trust and develop capacity for the next stage.
Successful implementation of long-term aims

Educational leaders need to look not just forward but also outwards. That’s not about copying and pasting solutions from other places; it’s about looking seriously and dispassionately at good practice in our own countries and elsewhere to understand what works in which contexts.

School systems that feel threatened by alternative ways of thinking get trapped in old practice. The ones that progress are those that are open to the world and ready to learn from and with the world’s education leaders.
The real obstacle to education reform is not conservative followers but conservative leaders

- be transparent with teachers and school leaders about where reform is heading and what it means for them
- be aware of how organisational policies and practices can either facilitate or inhibit transformation
- tackle institutional structures that are built around the interests and habits of educators and administrators rather than learners
- recognise emerging trends and patterns and see how these might benefit or obstruct the goals of change
- use knowledge about what motivates people to convince others to support change
- use understanding of power and influence to build the alliances and coalitions needed to get things done
- help rules become practice, and good practice to become culture
Thank you

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- PISA 2018 Results (Volume I): What Students Know and Can Do
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PISA Data Explorer: www.oecd.org/pisa/data

Email: Andreas.Schleicher@OECD.org