Education disrupted – education rebuilt
Salzburg seminars, 16 April 2020
Andreas Schleicher
Impact of Covid-19 on education

• **1.5bn** 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 leads to new tensions
• But lots of **innovative learning environments** emerging!
Access to a quiet place to study

Percentage of students that have access to a quiet place to study

Fig A1
Access to a computer for school work

Percentage of students that have access to a computer they can use for school work

Fig A2
Teachers have the necessary technical and pedagogical skills to integrate digital devices in instruction

Percentage of students in schools whose principal agreed or strongly agreed that teachers have the necessary technical and pedagogical skills to integrate digital devices in instruction
An effective online learning support platform is available

Percentage of students in schools whose principal agreed or strongly agreed that an effective online learning support platform is available

- Average
- Disadvantaged schools
- Advantaged schools

Fig A12
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.
Student Well-Being

- Cognitive
- Psychological
- Physical
- Social
Life satisfaction among 15-year-old students

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-point change on the student life-satisfaction scale

Fig III.11.7

Greater Life Satisfaction

Index of disciplinary climate  Index of exposure to bullying  Index of sense of belonging at school  Index of teacher support  Index of teacher feedback  Index of student co-operation  Index of student competition

-0.60 -0.40 -0.20 0.00 0.20 0.40 0.60 0.80

Change in students' average life satisfaction associated with a one-unit increase in the school-level indices

-0.60 -0.40 -0.20 0.00 0.20 0.40 0.60

After accounting for student and school characteristics

Before accounting for student and school characteristics

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After accounting for student and school characteristics

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Student co-operation and competition

Fig III.8.1

Index of student co-operation

Index of student competition

Student co-operation is relatively higher than student competition

Student competition is relatively higher than student co-operation

Mean Index
Growth mindset and reading performance

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

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.
The kinds of things that are easy to teach and test have also become easy to digitize.
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)
The multi-faceted world of knowledge
The human world of knowledge
The small world of the curriculum
The small world of the curriculum
The small world of the curriculum
The small world of the curriculum
The small world of the curriculum
The small world of the curriculum
The big world of learning

- **The True**
  The realm of human knowledge

- **The Good**
  The realm of ethics and judgement

- **The Just and Well-Ordered**
  The realm of political and civic life, binding social capital

- **The Beautiful**
  The realm of creativity, esthetics and design

- **The Sustainable**
  The realm of natural and physical health

- **The Prosperous**
  The realm of economic life
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

![Graph showing standardized regression coefficients for various skills under cooperative classroom climate for 10 and 15 years old students.](image-url)
School bullying is negatively related to students’ SE skills.
Importance of SE skills – **Better focus, harder to distract during class**

Trouble focusing is related to social and emotional skills (based on student, parent and teacher reports – older cohort)
Relationship of social and emotional skills and students’ gender

Relation between students’ gender and their SE skills

![Graph showing standardized regression coefficients for social and emotional skills and gender](image)
Brain sensitivity of important developmental areas

- Language
- Numbers
- Peer social skills
- Emotional control

Graph showing brain sensitivity over age in years.
Based on a balanced, broad set of domains

- **Emergent Literacy**
  - Listening, understanding

- **Emergent numeracy**
  - Dealing with numbers and patterns

- **Self-regulation**
  - Regulating mental processes

- **Cognitive skills**

- **Social-emotional skills**

- **Empathy and trust**
  - Understanding and trusting others

- **Prosocial behaviour**
  - Controlling impulses, co-operating with others
An example

- Likes to learn new things 3.5 times more likely
- Understands others’ feelings, like when they are happy, sad or angry 2.5 times more likely
- Is emotionally moved by the problems of people in books or stories 2.0 times more likely

Source: IELS Main Study
Transformative competencies

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

• Anticipation
• Action
• Reflection
Innovative projects and the use of ICT can be useful strategies to address the current challenges to school

<table>
<thead>
<tr>
<th>Percentage of teachers who frequently or always use the following practices in their class (OECD average-31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom management</td>
</tr>
<tr>
<td>Tell students to follow classroom rules</td>
</tr>
<tr>
<td>Tell students to listen to what I say</td>
</tr>
<tr>
<td>Calm students who are disruptive</td>
</tr>
<tr>
<td>When the lesson begins, tell students to quieten down quickly</td>
</tr>
<tr>
<td>Explain to students what I expect them to learn</td>
</tr>
<tr>
<td>Explain how new and old topics are related</td>
</tr>
<tr>
<td>Set goals at the beginning of instruction</td>
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<tr>
<td>Refer to a problem from everyday life or work</td>
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<tr>
<td>Present a summary of recently learned content</td>
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<tr>
<td>Let students practise similar tasks</td>
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<tr>
<td>Give tasks that require students to think critically</td>
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<tr>
<td>Have students work in small groups to come up with a solution</td>
</tr>
<tr>
<td>Let students to solve complex tasks</td>
</tr>
<tr>
<td>Present tasks for which there is no obvious solution</td>
</tr>
<tr>
<td>Let students use ICT for projects or class work</td>
</tr>
<tr>
<td>Give students projects that require at least one week to complete</td>
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<tr>
<td>Clarity of instruction</td>
</tr>
<tr>
<td>Cognitive activation</td>
</tr>
<tr>
<td>Enhanced activities</td>
</tr>
<tr>
<td>Industrial systems</td>
</tr>
<tr>
<td>-------------------------------------------</td>
</tr>
<tr>
<td><strong>Some</strong> students learn at high levels (sorting)</td>
</tr>
<tr>
<td>Routine cognitive skills</td>
</tr>
<tr>
<td>Standardisation and compliance</td>
</tr>
<tr>
<td>‘Tayloristic’, hierarchical</td>
</tr>
<tr>
<td>Primarily to authorities</td>
</tr>
</tbody>
</table>
Thank you

Find out more about our work at [www.oecd.org/pisa](http://www.oecd.org/pisa)

- PISA 2018: *Insights and Implications*
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