OECD REVIEW OF THE ITALIAN STRATEGY FOR DIGITAL SCHOOLS

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Italian schools have low ICT penetration
Italy lags behind most OECD countries for school ICT equipment (and usage)

Source: European Schoolnet (2013), Survey of Schools: ICT in Education.
Percentage of students by school intensity of digital equipment (Grade 4), 2012

Type 1: high equipment, fast broadband, high connectedness;
Type 2: medium equipment, slow or no broadband, some connectedness

Source: European Schoolnet (2013), Survey of Schools: ICT in Education.
Percentage of students by school intensity of digital equipment (Grade 8)

Type 1: high equipment, fast broadband, high connectedness;
Type 2: medium equipment, slow or no broadband, some connectedness

Source: European Schoolnet (2013), Survey of Schools: ICT in Education.
Italy’s national plan for digital schools: strengths and limitations
3 objectives:
• Introduce ICT as part of the daily tools of classroom activities
• Experiment new models of school organisation and of teaching
• Support the development of new products (resource and devices)

4 programmes:
• Piano LIM, cl@sse 2.0, scuol@ 2.0, Editoria digitale scolastica

Related initiatives
• Development of national and school information systems
• Phasing out of paper-only textbooks (e-textbook law)
• Smart cities
Strengths

• Means are aligned with the goal of increasing the use of ICT in schools (LIM as main focus)

• The “contagion” strategy creates teacher demand rather than resistance (voluntary process)

• An efficient procurement procedure (Consip)

• The strategy builds capacity for wider change (phased approach, experiments)
Limitations

• Budget: EUR 30 million per year
  – 5 euros per student
  – 0.1% of the MIUR budget for schooling

• Too slow pace of equipment (5 to 16% of classrooms equipped with IWB)
• Too few schools concerned by cl@sse 2.0 (416) and scuol@ 2.0 (14+15)
• Not enough professional development
• Not enough digital resources
The slow pace of the *Piano LIM*: it would take 15 years to reach the current UK level.

### Classroom Penetration of Interactive Whiteboards

<table>
<thead>
<tr>
<th>Country</th>
<th>2011 - estimated classroom penetration</th>
<th>2016 - expected classroom penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>80%</td>
<td>93%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>53%</td>
<td>69%</td>
</tr>
<tr>
<td>Denmark</td>
<td>53%</td>
<td>66%</td>
</tr>
<tr>
<td>Australia</td>
<td>49%</td>
<td>58%</td>
</tr>
<tr>
<td>USA</td>
<td>41%</td>
<td>52%</td>
</tr>
<tr>
<td>Canada</td>
<td>31%</td>
<td>46%</td>
</tr>
<tr>
<td>Spain</td>
<td>29%</td>
<td>43%</td>
</tr>
<tr>
<td>Mexico</td>
<td>20%</td>
<td>28%</td>
</tr>
<tr>
<td>Italy</td>
<td>14%</td>
<td>30%</td>
</tr>
<tr>
<td>Germany</td>
<td>11%</td>
<td>23%</td>
</tr>
<tr>
<td>Korea</td>
<td>9%</td>
<td>19%</td>
</tr>
<tr>
<td>China</td>
<td>8%</td>
<td>28%</td>
</tr>
<tr>
<td>France</td>
<td>8%</td>
<td>16%</td>
</tr>
<tr>
<td>Turkey</td>
<td>5%</td>
<td>81%</td>
</tr>
<tr>
<td>India</td>
<td>1%</td>
<td>12%</td>
</tr>
</tbody>
</table>

*Source: Futuresource consulting (2012)*
our recommendations
Three main objectives

1. Speed up the uptake of ICT in Italian schools and classrooms

2. Refocus the innovation projects on scuol@ 2.0 to create an Innovation Laboratory Network of test bed schools

2. Align other system elements (curriculum and assessment, etc.)

→ Create the conditions for peer learning, system learning, and pedagogic transformation
speed up the uptake of ICT
Recommendations to speed up the uptake of ICT in Italian classrooms

• Increase the budget of the *Piano LIM*
  – More public and private funds
  – Allocate funds through matched funding schemes
  – Open the plan to other, sometimes cheaper technologies (e.g. PC, visualiser and projector)

• Develop digital learning resources
  – Continue to mobilise entrepreneurs and publishers
  – Mobilise open educational resources (OER)
    • Translate existing quality OER in Italian
    • Develop a central bank of OER (and more) for teachers
    • Encourage teachers to develop and share digital teaching resources (awards)
Recommendations to speed up the uptake of ICT in Italian classrooms

• Invest in the professional development of teachers and school principals
  – Give schools the possibility to choose between the current mandatory formal training and a flexible school-wide entitlement for training (staff release time, school mentoring, whole-school training, etc.)
  – Develop the capacity of INDIRE blended model

• Set operational targets, milestones for programme completion, and metrics for success.
Innovation Laboratory Network of test bed schools
Why an Innovation Lab Network is needed

- Equipment by itself does not change pedagogic practices or school practices
- Need to pilot and experiment different uses of technology for pedagogic purpose
- Need to experiment new organisational practices for the better use of ICT
- Need to identify what works and what does not work
Recommendations to foster innovation in school organisation and teaching

• Discontinue the cl@sse 2.0 initiative
  – Too small, not enough professional learning, too expensive for contagion

• Concentrate resources on the scuol@ 2.0 initiative
  – Test-bed schools to research, develop, and pilot solutions for all remaining schools
  – Include professional development provisions
  – Pay more attention to organisational practices
  – Strengthen the competitive design of the programme
  – Mainstream matched funding and partnerships

• Redesign the plan around local school networks (distretti scol@stici 2.0)?
Recommendations to foster innovation in school organisation and teaching

• Create the conditions for system learning
  – Encourage action research and partnerships with researchers within the network
  – Have a rich information system open to researchers and allowing comparisons with other schools
  – Convene meetings of test bed schools

• Support research on teaching and learning with ICT
  – Fund research grants, doctoral scholarships and post-doctoral positions
design supportive policy environment
Design a supportive policy environment

• Build an ICT infrastructure and vision
  – Prioritise the provision of adequate bandwidth in all schools as part of cross-government policy
  – Plan the integration of ICT in the classroom with longitudinal information systems and learning management systems

• Address parental concerns about the safety of the school internet environment and support local initiatives for parental ICT training programmes
Design a supportive policy environment

• Curriculum and assessment
  – Develop support tools for ICT integration in subject curriculum
  – Monitor ICT skills as well as other desired skills
  – Develop teacher-friendly assessment tools

• Stimulate innovation and knowledge sharing
  – Give awards and organise innovation fairs
  – Support innovative school projects
  – Develop challenge prizes
  – Incentivise businesses and other stakeholders to develop innovative solutions
Towards the design of an innovation-friendly ecosystem in education?
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www.oecd.org/edu/innovation