In which areas do technology-enabled schools invest?

Financial Investment Areas in Technology-Enabled School Models

Data represent 11 school districts, 110 schools, 850 classrooms, and 36,000 students as of fiscal year (Milam et al., 2020)
Does the federal government fund school innovation?

Federal Grants (in Millions) for School Improvement and Innovation, by Programs: 2019 - 2020

- Supporting effective instruction State grants
  - FY2020: 2131.8
  - FY2019: 2055.8
- 21st century community learning centers
  - FY2020: 1249.7
  - FY2019: 1221.7
- Student support and academic enrichment grants (ESEA IV-A)
  - FY2020: 1210.0
  - FY2019: 1179.0
- Charter schools grants (ESEA IV-C)
  - FY2020: 440.0
  - FY2019: 427.0
- Teacher and school leader incentive grants (ESEA II-B-1)
  - FY2020: 200.0
  - FY2019: 200.0
- Rural education (ESEA V-B)
  - FY2020: 185.8
  - FY2019: 180.8
- Education innovation and research (ESEA IV-F-1)
  - FY2020: 190.0
  - FY2019: 130.0
- Magnet schools assistance
  - FY2020: 107.0
  - FY2019: 113.7
- Supporting effective educator development (SEED) (ESEA II-B-4, section 2242)
  - FY2020: 80.0
  - FY2019: 75.0
- Arts in education (ESEA IV-F-4, section 4644)
  - FY2020: 30.0
  - FY2019: 29.0
- Educational technology, media, and materials
  - FY2020: 29.5
  - FY2019: 28.0
- Ready to learn programming (ESSA IV-F-4, section 4643)
  - FY2020: 29.0
  - FY2019: 27.7
- American history and civics education (ESEA II-B-3)
  - FY2020: 4.8
  - FY2019: 4.8

Source:
Fiscal Year 2021 Budget Summary (ed.gov)
Does the federal government fund internet connectivity?

Source: Fast E-rate Decisions to More Applicants - FundsForLearning.com
Does the federal government fund professional development in using technology?

### Teacher professional development topics supported with Title II-A funds

<table>
<thead>
<tr>
<th>Used funds for this topic</th>
<th>Reported as one of two largest expenditures in this area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional strategies for academic subjects</td>
<td>75%</td>
</tr>
<tr>
<td>Using data and assessments to guide instruction</td>
<td>69%</td>
</tr>
<tr>
<td>Teacher content knowledge in ELA</td>
<td>68%</td>
</tr>
<tr>
<td>Teacher content knowledge in STEM</td>
<td>61%</td>
</tr>
<tr>
<td>Instructional strategies for meeting state content standards</td>
<td>59%</td>
</tr>
<tr>
<td>Classroom behavior management</td>
<td>58%</td>
</tr>
<tr>
<td><strong>Using technology</strong></td>
<td><strong>55%</strong></td>
</tr>
<tr>
<td>Teacher content knowledge in other subjects</td>
<td>52%</td>
</tr>
<tr>
<td>Instruction and academic support for students with disabilities</td>
<td>44%</td>
</tr>
<tr>
<td>Instruction and academic support for English learners</td>
<td>36%</td>
</tr>
</tbody>
</table>

### Principal professional development topics supported with Title II-A funds

<table>
<thead>
<tr>
<th>Used funds for this topic</th>
<th>Reported as one of two largest expenditures in this area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helping teachers improve instruction</td>
<td>71%</td>
</tr>
<tr>
<td>School improvement planning and interventions</td>
<td>67%</td>
</tr>
<tr>
<td>Advancing organizational development</td>
<td>53%</td>
</tr>
<tr>
<td>Engaging parents and the community</td>
<td>31%</td>
</tr>
<tr>
<td>Developing and managing the school's workforce</td>
<td>28%</td>
</tr>
</tbody>
</table>

Source: [State and District Use of Title II, Part A Funds in 2018–19 (ed.gov)](https://ed.gov)
The American Rescue Plan earmarks about $123 billion for K12 public schools to mitigate the learning effects of the pandemic including in-person instruction.

K12 UNRESTRICTED USES
Title 1 formula funding (80%)

K12 public schools
$123 billion

NYS share
$8.9 billion

In school year 2016–17, elementary and secondary public school revenues totaled $736 billion in constant 2018–19 dollars. Of this total,

- Federal 8% ($60 Billion)
- Local 47% ($330 Billion)
- State 45% ($346 Billion)

K12 RESTRICTED USES
Reserved to address learning loss & prepare for in-person schooling (20%)

PRIVATE SCHOOLS $2.7 billion

HIGHER EDUCATION

Source:
The Condition of Education - Preprimary, Elementary, and Secondary Education - Finances - Public School Revenue Sources for Each State April (2020); Department of Education Announces American Rescue Plan Funds for All 50 States, Puerto Rico, and the District of Columbia to Help Schools Reopen | U.S. Department of Education; k12-covid-relief-infographic-v1-20210409.pdf (archi-technology.com)
Three Takeaways

**Challenge**
- Not every school may receive competitive grants to support the implementation of innovative school models.

**Solution**
- Schools can repurpose General Funds and should be more strategic using federal sources.
  - Purchase technology with money previously used to purchase instructional materials
  - Redeploy professional development budgets in ways that support the technology move.

**Limit**
- Only 8% of school funding comes from federal government; federal funds for school innovation is limited.
“When the education model changes dramatically, it’s vital to configure all aspects of financial management and policy to support it so that the desired changes in schools can be effectively implemented and sustained at a quality level for years to come.” (Milam, Stewart, & Morrison-Reed, 2020)

Jinghong Cai, Ph.D., jcai@nsba.org