Roadblocks to quality education in a time of climate change

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Caveats on terminology

• “Education” refers to K12 education in this presentation
  • Adult education, non-formal education, informal education, public awareness raising, technical training, etc. are all critical dimensions of learning for climate action

• “Education for Sustainable Development” (ESD) refers to UNESCO’s desired vision of education
Is the education sector standing up to the task?

• No

  • Lack of (adult) leadership in the global education community

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<tr>
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<tbody>
<tr>
<td>China</td>
<td>1,392,730,000</td>
<td>10,065</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>1,352,617,330</td>
<td>2,654</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>327,167,430</td>
<td>5,416</td>
<td>X</td>
</tr>
<tr>
<td>Indonesia</td>
<td>267,663,430</td>
<td>615</td>
<td>X</td>
</tr>
<tr>
<td>Pakistan</td>
<td>212,215,030</td>
<td>224</td>
<td>X</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,552,393,220</strong></td>
<td><strong>18,974</strong></td>
<td>X</td>
</tr>
<tr>
<td><strong>% of total</strong></td>
<td><strong>46.8%</strong></td>
<td><strong>51.9%</strong></td>
<td>X</td>
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Photo credit: https://www.theverge.com/2019/3/15/18266559/students-strike-for-climate-across-the-united-states
Is the education sector standing up to the task?

• No
  • Lack of understanding of the transformative potential of education, and how to leverage education entry points

Education in Nationally Determined Contributions:
  1. General, awareness raising activity to ensure the success of a non-education sector’s climate action strategy
  2. A positive outcome from the success of another sector’s contribution
  3. Collateral damage
  4. Context-setting development need

https://www.brookings.edu/research/girls-education-in-climate-strategies/
What’s holding back the education sector?

- Competing priorities
- Lack of radical vision
- Problem of definition and scope
- Poor monitoring and accountability
- Lack of support for teachers
Roadblock #1

• Ecoliteracy is low on the to-do list when basic literacy is still an unmet global goal
  • Especially the case for countries struggling to deliver basic education services

• This means ESD is framed as complementary/additional to, rather than fundamental/integrated throughout the curriculum
Roadblock #2

• The global education community lacks a radical vision for education
  • The UN Decade of Education for Sustainable Development (2005-2014) failed to reorient education away from neoliberalism toward sustainability
Roadblock #2

• The global education community lacks a radical vision for education
  • The learning crisis...

https://report.educationcommission.org/report/
Roadblock #2

• The global education community lacks a radical vision for education
  • Education efforts focused on “greening” schools or in disaster risk reduction

What is a green school?

Green schools strive to achieve success in three pillars. Over 60 organizations in the United States and abroad use these pillars to describe their work on green schools, including the U.S. Department of Education’s Green Ribbon Schools award program.

- Reduce environmental impacts & costs
- Improve occupants’ health & performance
- Increase sustainability literacy

Missing: radical reimagining of the purpose of education
Roadblock #3

• ESD has a problem of definition and scope
  • Current iterations of ESD are at odds with transformational learning
  • The narrow focus on climate science diverts attention to climate justice

<table>
<thead>
<tr>
<th>Normative ESD</th>
<th>Transformative ESD</th>
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<tbody>
<tr>
<td>Focused on measurable cognitive learning: environmental/climate literacy (knowledge about climate science, etc.)</td>
<td>Focused on socioemotional learning: sustainability competencies (knowledge, values, attitudes, affect &amp; skills like systems thinking)</td>
</tr>
<tr>
<td>Individualistic, one-directional, transmissive, disciplinary pedagogy</td>
<td>Collective, interactive, transformative, transdisciplinary pedagogy</td>
</tr>
<tr>
<td>Teaches what to think</td>
<td>Teaches how to think</td>
</tr>
<tr>
<td>Learner as receiver of knowledge</td>
<td>Teacher-Learner as agent of change</td>
</tr>
<tr>
<td>Centered on low-impact actions (recycling, etc.)</td>
<td>Centered on disruption of status quo &amp; root causes</td>
</tr>
<tr>
<td>Aimed at mass-producing workers for the global economy</td>
<td>Aimed at sparking a shift in consciousness &amp; systems-level change</td>
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Roadblock #4

- Monitoring and accountability mechanisms are oriented toward passive progress in education

<table>
<thead>
<tr>
<th>SDG Target</th>
<th>SDG Indicator</th>
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<td>Goal 12. Ensure sustainable consumption and production patterns</td>
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</table>
12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature  
12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment |
| Goal 13. Take urgent action to combat climate change and its impacts |  
13.3 Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning  
13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary, and tertiary curricula  
13.3.2 Number of countries that have communicated the strengthening of institutional, systemic, and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions |
|  
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development and sustainable lifestyles  
4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment  
4.7.4 Percentage of students by age group (or education level) showing adequate understanding of issues relating to global citizenship and sustainability  
4.7.5 Percentage of 15-year-old students showing proficiency in knowledge of environmental science and geoscience |
Roadblock #4

• Monitoring and accountability mechanisms are oriented toward passive progress in education

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<th>Out of 160 NDCs...</th>
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<tr>
<td>68% reference the term “education,” yet only 26% do so in reference to school children</td>
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<tr>
<td>Only 3 mention girls, 1 mentions girls’ education, and 0 formally recognizes the contributions that an investment in girls’ education could make toward their climate strategy</td>
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<td>The top 20 carbon emitting countries in the world are least focused on the education of children</td>
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<td>Countries with a youth bulge are more likely to attend to intergenerational dimensions of climate change and climate action, like education</td>
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https://www.brookings.edu/research/girls-education-in-climate-strategies/
Roadblock #5

• Teachers lack the systemic support to become change agents for sustainability
  • 86% of teachers think climate change should be taught in classrooms, yet only 42% actually do so
  • ~50% of teachers devote about 2 hours/year to climate change
  • >25% of teachers “give equal time” to perspectives that raise doubt about climate change
  • 31% of teachers send “explicitly contradictory messages” about the causes of climate change

(Kamenetz, 2019; Plutzer, Hannah, et al., 2016; Plutzer, McCaffrey, et al., 2016)
So, what next?

- Build consensus on a set of principles for radical, transformative visions of education
- Identify the entry point(s) for coordinated action
- Synthesize clear guidance and how-to’s for decisionmakers
Build consensus on a set of principles for radical, transformative visions of education
Identify the entry point(s) for coordinated action

Tackling the 5 roadblocks

ESD for 2030 Framework

Activities by Member States: Nationwide Multi-Stakeholder Initiative
- In the 5 priority action areas
- Aligned with the national SDGs framework

1. Advancing Policy
   - Integrating ESD in global, regional, and national policies of education & sustainable development

2. Learning Environment
   - Promoting whole-institution approach
   - Providing capacity development opportunities
   - Providing opportunities for youth engagement

3. Teachers & Educators
   - Empowering local communities as "nodal" platforms for all priority action areas

4. Youth
   - Normative guidelines & country-level support
   - Provide regular platforms to meet & exchange
   - Monitor achievements in the 5 priority action areas & programme implementation, in line with SDG Target 4.7 monitoring

5. Community
   - Develop a dedicated programme to inform the role of education
   - Monitor emerging issues & trends, conduct analytical work for their pedagogical implications

ESD in the classroom
Identify the entry point(s) for coordinated action

Power of 10 framework of cross-scale optimization for interventions aimed at rapid sustainability transformation, applied to the education system

https://eartharxiv.org/feaq5/
Synthesize clear guidance and how-to’s for decisionmakers

• Cross-sectoral coalitions for coordinated action
• Climate-responsive and climate-oriented education sector plans
Report link:

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