Sustainable Jobs and Educational & Training Strategy: What Is it, Why Is It Important, and Where Do We Go From Here

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Taking it to the Next Level: Strategies for Adaptation Across the Sustainability Curriculum Conference
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Presentation Outline

1. What is wrong with the current framing of green jobs & employment in terms of higher educational institutions

2. Why is the broader discussion of sustainable jobs, education & training important for higher education and society

3. What are the barriers to creating a more integrated sustainable jobs, education & training strategy

4. How can a more integrated sustainable jobs, education & training strategy be achieved for this decade and beyond
1.1 Moving from green to sustainability as the new educational focus

- One common definition of green jobs is “well-paid, career track jobs that contribute directly to preserving or enhancing environmental quality” (Apollo Alliance 2008) including employment in the wind, solar, and biofuel production; energy efficiency, and smart grid industries.

- However, many green-collar jobs as currently defined as such in the media and academic employment research are not represent positions that require a college degree and typically involve education & training only beyond high school (Green and Dane 2010).

- The way that we’re currently framing the national green jobs & employment discussion is only mildly relevant to many higher educational institutions except for a number of impactful community colleges (Laney College!)

- What does a sustainable jobs education, training, and knowledge strategy for higher education look like for the new decade and beyond?
### 2.1 Sustainable business, entrepreneurship, technology R&D is becoming next global economic and business competitive landscape

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<thead>
<tr>
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<th>INTERNET</th>
<th>SUSTAINABLE TECHNOLOGY</th>
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<tbody>
<tr>
<td><strong>MADE OF</strong></td>
<td>Bits, Pixels</td>
<td>Atoms, Molecules</td>
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<tr>
<td><strong>WHAT’S AT STAKE</strong></td>
<td>Finding friends on Facebook</td>
<td>Life on the Planet</td>
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<tr>
<td><strong>CAPITAL NEEDED</strong></td>
<td>LOW Google needed $25 million</td>
<td>HIGH Hundreds of millions</td>
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<tr>
<td><strong>TIME TO SUCCESS</strong></td>
<td>QUICK 3 to 5 years</td>
<td>LONGER 5 to 10 years</td>
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<td><strong>MARKET POTENTIAL</strong></td>
<td>LARGE Billions</td>
<td>ENORMOUS Trillions</td>
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**SOURCE:** John Doerr and Fred Krupp, Fast Company Magazine (April 2008)
2.2 Sustainability infrastructure: energy, electricity, building/construction and mobility

- Motor vehicles: 12 – 20 years
- Nuclear: 30 – 60 years
- Coal power: 45+ years
- Hydro: 75+ years
- Gas turbines: 25+ years
- Buildings: 45+++ years

**SOURCE:** Adapted from World Business Council for Sustainable Development (2004)
3.1 Need a greater investment priority on sustainability

Which country has the greenest bail-out?

- **US**
  - Amount spent on fiscal stimulus: **$972bn**
  - Amount spent on green measures: **$112.3bn**

The first US stimulus package, approved in October 2008, brought the green agenda to the fore. It contained $18.2bn in tax cuts and credits for clean energy, a $9.45bn extension of tax credits on wind and solar power, and $2bn in spending on carbon capture and storage.

However, the second package, passed in February 2009, cut a number of expected green features and resulted in an estimated $57bn loss in environmental spending.

Congress granted $22.5bn in incentives for renewable energy, including further extensions to tax credits on wind, biomass and geothermal energy. There was also investment in energy efficiency, with $52bn for projects such as modernising the electricity grid. $10bn was set aside for public transport.

The combined effect of the investments is expected to create around 2.5m green jobs.

*Source: HSBC  All figures quoted in US dollars*
3.2 Increase focus on K-12 sustainability education & knowledge

Percentage of students at each proficiency level on the environmental science performance index (Source: OECD “Green at 15” 2010)
Supervised/evaluated internship/community-based project where students apply college learning in real-world setting
- Very effective: 69%
- Fairly effective: 83%

Advanced comprehensive senior project, such as thesis, demonstrating student’s depth of knowledge in major & problem-solving, writing, and analytic reasoning skills
- Very effective: 46%
- Fairly effective: 79%

Essay tests to evaluate level of problem-solving, writing, and analytical-thinking skills
- Very effective: 35%
- Fairly effective: 60%

Electronic portfolio of student’s college work, including accomplishments in key skill areas and faculty assessments
- Very effective: 33%
- Fairly effective: 56%

Multiple-choice tests of general content knowledge
- Very effective: 7%
- Fairly effective: 32%

Source: Association of American Colleges & Universities Survey (2008)
4.1 How can a more integrated sustainable jobs education, training, and knowledge strategy for higher education be achieved for this decade and beyond?

Increasing focus on K-12 sustainability education & knowledge

Rethinking the way student learning assessment is carried out in terms of sustainability skills & knowledge and workforce development

Strengthening public-private sector sustainability related investments

Sustainable jobs education, training & knowledge strategy