The Process of Changing Architectural Education to Sustainability

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How Can the Architect Contribute to a Sustainable World?

1) A fundamental redefinition of the Architect's role

Fundamental definitions of the architect's roles and ambitions can be found in the work of the Roman engineer and the first architectural educator, Vitruvius. These definitions can be interpreted to include the concepts of sustainability:

• Commodity, usually understood as fitness for use, is broadened to mean effectiveness, in environmental, economic, and programmatic terms.

• Firmness, surpasses structural reliability and incorporates long term environmental **sustainability**, comfort, and longevity.

• Delight, moves beyond pleasure in aesthetics and embraces deeper meaning.

2) The Architect as a leader

The essential role of architect as leader has two complementary aspects:

▶ Vision

▶ Facilitation

This has to be infused into the education of students. Students need to be given the tools to design buildings that mimic natural systems and have the capacity to reconnect people to nature – "ecomorphic" buildings.

A new definition of the architect needs to include being an agent of social change and an advocate for systems and ecological thinking. Design is fundamentally a generative art requiring generative impulses, hubris, to be balanced with regenerative impulses, humility.

3) The larger context

The ecology of architecture requires an understanding of **living systems** and basic science. Buildings need to be conceived as part of **larger systems**. This includes understanding the **local and regional environmental** contexts, the complex network of material and constructional systems and their impact, and the cultural, social and economic contexts.

4) Architecture and the other design professions

The interdependency of different design disciplines (architecture, engineering, electrical, structural, transportation etc.) raises a number of questions as to how the sustainability agenda might transform the relationship between the **academy** and **industry.**

Who drives the agenda in links between industry and the university or between industry and the architectural profession?

5) Changing architectural education

Transforming architecture education means focusing on

▶ | how to teach? |

▶ | as well as what is being taught? |

Teachers need to expose students to the best ideas, exemplify commitment in their own work and expand the boundaries of the discipline and the profession.

A primary requirement of moving architecture education beyond architecture is an understanding of design that goes beyond buildings.

6) Incentives for Change

Three types of incentives are likely to have a transformative effect in design schools and the larger campuses where they are located:

- financial support;
- lectures and seminars; and
- changes to the accreditation process

RECOMMENDATIONS

▶ **1) Transform the Curriculum**

Strategies are needed for integrating sustainable design concepts in all four

of the major areas in the architectural curriculum: History/Theory; Technology;

Studio; and Professional Practice;

▶ **2) Transform Studio Teaching**

▪ Work on real life problems at different scales either on the campus itself or in the

   community at large.

▪ Develop adaptable ("portable") and preferably regenerative ("ecological") learning

   tools.

▪ Support and **enrich programs** on "design/build" to ensure that they have ecological

   considerations;

▪ Develop ecological footprint **exercises** and faculty training.

- 3) Support Student Leadership
  - Create and offer workshops on activist strategies for students to help lead in the process of changing schools;

- 4) Support Faculty
  - Provide grants for research and course development;
  - Organize seminars for faculty on latest and best designs;
  - Organize workshops for faculty to share information
  - Establish and maintain networks for exchanging ideas and information.

- 5) Support Information Dissemination
  - Facilitate the exchange and updating of information among faculty using the internet;
  - Coordinate and publish the work of "Living Labs"

- ▶ 6) Use the Accreditation process to support change
- ▪ Develop criteria

- ▶ 7) Complete a comprehensive assessment of Architectural schools
- ▪ Develop a unified self-assessment tool for all schools;
- ▪ Encourage and assist individual schools to conduct a self-assessment to create a baseline of sustainability components in all aspects of curriculum and operations;

- ▶ 8) Integrate students and faculty into the planning, construction and rehab of campus facilities.
- ▪ Create links with campus administration, facilities management, buildings and grounds and other campus departments to use design school skills to green campus operations.

Reference:

Second Nature
Education for Sustainability

How Can the Architect Contribute to a Sustainable World?

Proceedings of a conference
at Wingspread Conference Center, Racine, Wisconsin.
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