

Designing Education for Innovation

Conference on
Innovations in Education for India, China, and America

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Learning to “be” an innovator

- Globalization puts a premium on innovation skills. Universities are “*the* venue for teaching them.” [*Tom Friedman*]
- Traditional university approaches to learning must be supplemented with “action learning”.
 - “Learning to be” v. “Learning about”
 - “Know how” v. “Know that”
[*John Seely Brown and Paul Duguid, Xerox PARC*]
 - The “Knowing-Doing Gap”
[*Jeff Pfeffer, Stanford Business School*]

Such learning is consistent with the university's core purposes

Derek Bok (2006) lists these purposes as:

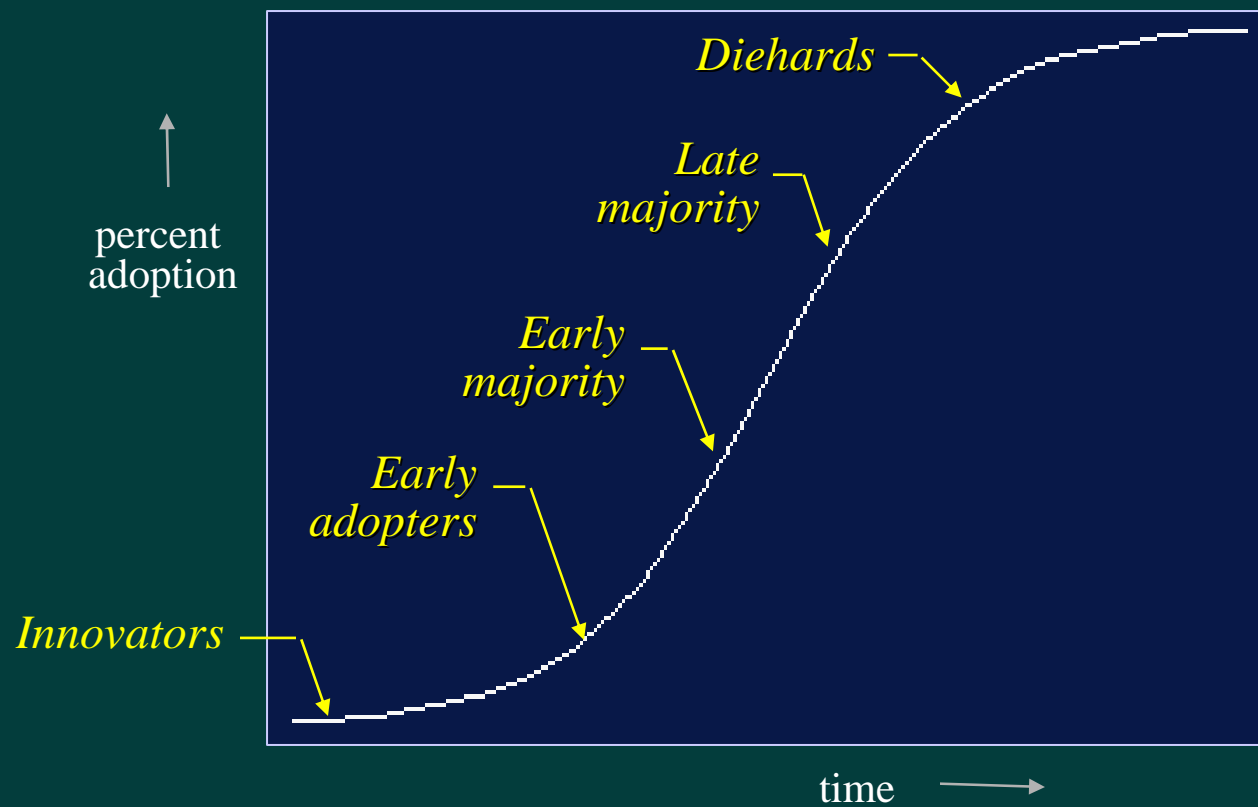
- *Learning to Communicate*
- *Learning to Think*
- *Building Character*
- *Preparation for Citizenship*
- *Living with Diversity*
- *Preparing for a Global Society*
- *Acquiring Broader Interests*
- *Preparing for a Career*

These are more “learning to be” than “learning about”.

Still, it's important to learn something *about* innovation

- **Creative Destruction (Joseph Schumpeter)**
 - The invisible hand of entrepreneurship overcomes vested interests to move the economy forward.
 - “Wild spirits,” big companies, or both?
 - Venture capital (e.g., Silicon Valley)
- **Entrepreneurs**
 - Energy and sacrifice (“the entrepreneurs diet”)
 - Thinking out of the box
 - Teams
 - The importance of failure

Stages of Adoption for Innovations



Other Important Concepts

- **Innovation as constraint busting**
 - But after each constraint there's another one.
 - “How the electric motor flattened the factory.”
- **Evolution of industry structure**
 - **New entrants: novel design concepts and new markets**
 - **Responses by established firms: more innovation**
 - **Emergence of a dominant product design**
- **Change Agency**
 - **As an element of education for innovation**
 - **How to stimulate change within a university**

Academic Quality Work (AQW)

- **“Quality work” consists of purposeful and organized activities dedicated to improving and assuring the quality of academic outcomes.**
 - These activities govern the delivery, evaluation, and systematic improvement of teaching and research.
 - They should not be confused with teaching itself or the doing of research.
- **Improving AQW will boost the quality of teaching, learning, assessment, and research.**
 - Education for innovation can be included explicitly in AQW.

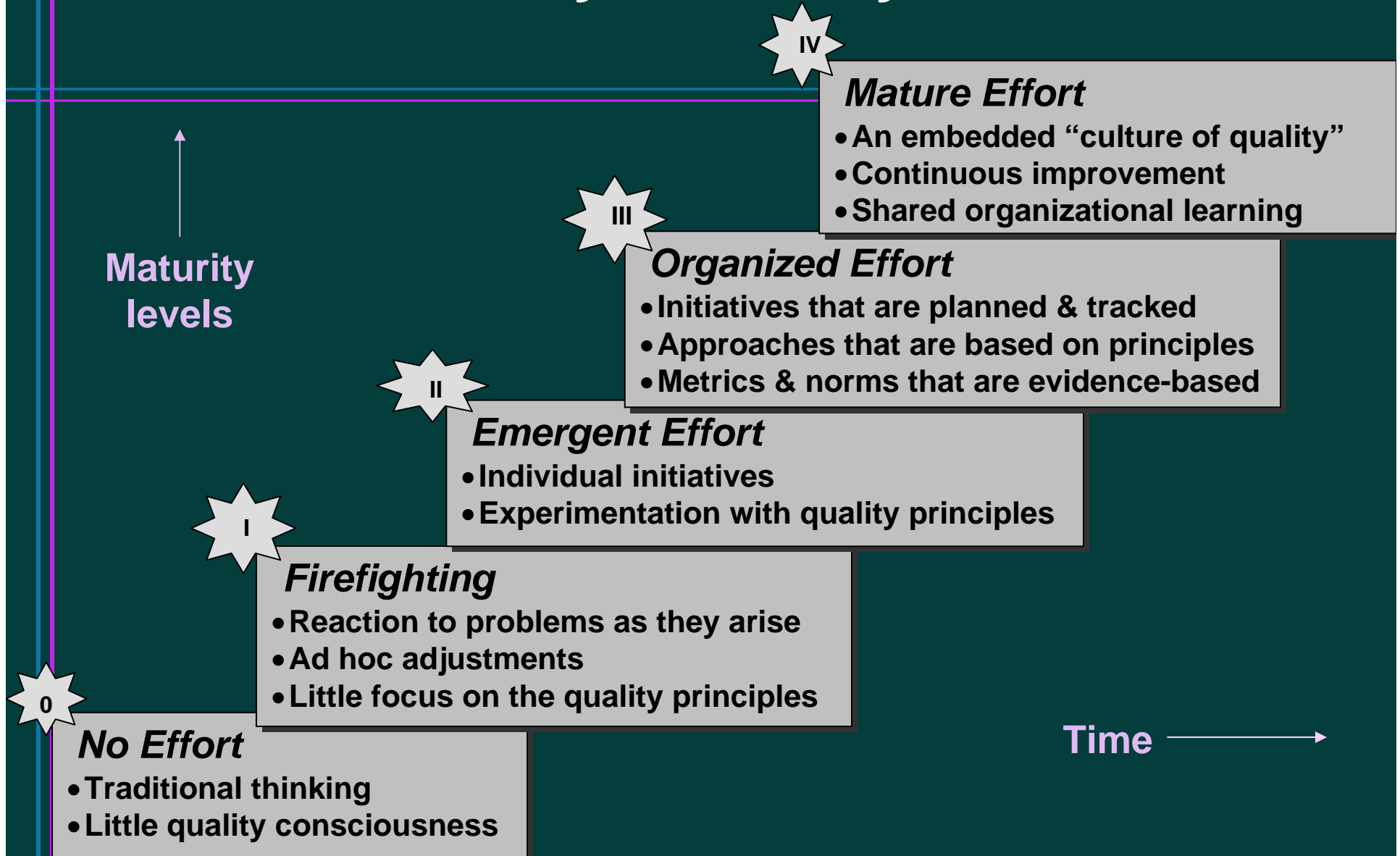
Focal Areas of Academic Quality Work

- **Determination of desired learning outcomes**
 - *What* is to be taught and *why*
- **Design of curricula**
 - How the objectives map to *content materials*
- **Design of teaching and learning methods**
 - Faculty teaching and student learning *activities*
- **Design of learning assessment measures**
 - *Feedback* for students—*and* faculty
- **Implementation quality assurance**
 - Ensuring that the designs will be carried out—day in and day out, by all faculty including adjuncts

Quality Principles

- Define education quality in terms of *value added* for students (“customers”, “clients”)—critical for access.
- Focus on the *processes* of teaching and learning, assessment, and quality assurance.
- Strive for *coherence* among objectives, curricula, teaching and learning activities, and assessment.
- *Work collaboratively* to achieve mutual involvement and support (teams, teamwork).
- *Base decisions on evidence* wherever possible.
- Identify and learn from *best practice* (benchmark, reduce controllable quality variation).
- Give *continuous improvement* a high priority.

Maturity of Quality Work



Questions & Discussion



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