Copyright Milton Glick, 2002. This work is the intellectual property of the author. Permission is granted for this material to be shared for non-commercial, educational purposes, provided that this copyright statement appears on the reproduced materials and notice is given that the copying is by permission of the author. To disseminate otherwise or to republish requires written permission from the author.
Milton Glick
Senior Vice President and Provost
Arizona State University
Thoughts from a Recovering Technophile

not quite

^ Recovering Technophile
## The Answer is Technology – What was the Question?

<table>
<thead>
<tr>
<th>Metrics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Enhancement</td>
<td>People Intensity</td>
</tr>
<tr>
<td>Information Access</td>
<td>Decision-Making</td>
</tr>
<tr>
<td>Student Convenience</td>
<td>Faculty Time Leveraged</td>
</tr>
<tr>
<td>Overall Student Experience</td>
<td>Return on Investment (ROI)</td>
</tr>
<tr>
<td>Cost Containment</td>
<td>Teaching &amp; Learning</td>
</tr>
</tbody>
</table>
The Answer is Technology – What was the Question?

<table>
<thead>
<tr>
<th>Metric</th>
<th>Provosts</th>
<th>Techies</th>
<th>Metric</th>
<th>Provosts</th>
<th>Techies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Enhancement</td>
<td>B</td>
<td>B</td>
<td>People Intensity</td>
<td>D+</td>
<td>B</td>
</tr>
<tr>
<td>Information Access</td>
<td>B+</td>
<td>B</td>
<td>Decision-Making</td>
<td>C+</td>
<td>C</td>
</tr>
<tr>
<td>Student Convenience</td>
<td>B</td>
<td>B</td>
<td>Faculty Time Leveraged</td>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td>Overall Student Experience</td>
<td>B</td>
<td>B</td>
<td>Return on Investment (ROI)</td>
<td>D+</td>
<td>C</td>
</tr>
<tr>
<td>Cost Containment</td>
<td>C-</td>
<td>C</td>
<td>Teaching &amp; Learning</td>
<td>C+</td>
<td>C</td>
</tr>
</tbody>
</table>
New Lexicon

- Market (strategic plan market university)
- Market share
- Market niche
- Market segmentation
- Return on investment
- Comparative advantage
- Benchmarks
- Key indicators
- Mass customization
- Core values
- Cost/benefit
- Partnering
- Students as customers
University Drivers

• Private sector forces
• Increased student demand and diversity
• Belief that costs are out of control
• New competitors
• Universities at risk
University Drivers

- Private sector forces
- Increased student demand and diversity
- Belief that costs are out of control
- New competitors
- Universities at risk
Peter Drucker Warns:

“Thirty years from now the big university campuses will be relics. Universities won’t survive. It’s as large a change as when we first got the printed book.”
Productivity Paradox

For three decades IT investment in U.S. industry resulted in little productivity gain.

Productivity gains realized through advances in communication not computing.
Sigmoid Curve/Inflection Point

Disruptive Technologies Introduced

Is Higher Ed at Inflection Point?
Sustaining vs. Disruptive Technologies

Hard Disk Capacity (MB)

Demand in mainframe market

Demand in minicomputer market

A. 14-inch drive technology
B. 8-inch drive technology

Source: Innovator’s Dilemma, Clayton Christensen
Changing Expectations
New Economy ↔ Velocity

Growth of Internet
Time to reach 30% of US Households

<table>
<thead>
<tr>
<th>Service</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>46</td>
</tr>
<tr>
<td>Telephone</td>
<td>38</td>
</tr>
<tr>
<td>Television</td>
<td>17</td>
</tr>
<tr>
<td>PC</td>
<td>13</td>
</tr>
<tr>
<td>Internet</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: The UCLA Internet Report: “Surveying the Digital Future”
UCLA Center for Communication Policy
University Drivers

• Private sector forces
• **Increased student demand and diversity**
• Belief that costs are out of control
• New competitors
• Universities at risk
High School Graduates

Source: Chronicle
US College Age Population, 18-24
Projected Growth, 2001-2015

Projected Growth: 4,257,111

Source: Carnevale & Fry
University Drivers

- Private sector forces
- Increased student demand and diversity
- **Belief that costs are out of control**
- New competitors
- Universities at risk
Public Attitudes about College Cost and Value

**Cost: 4-year public, in-state**
- Public Estimates: $9,694
- Actual Tuition: $3,111

**Value of a 4-year education**
- 59% cite as “usually worth the price”

Source: ACE
Public Attitudes About Paying for College

Proportion Citing Selected Purchases as “Usually Worth the Price”

<table>
<thead>
<tr>
<th>Purchase</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four-year college education</td>
<td>59%</td>
</tr>
<tr>
<td>Home computer</td>
<td>59%</td>
</tr>
<tr>
<td>Two-year college education</td>
<td>50%</td>
</tr>
<tr>
<td>Food at a grocery store</td>
<td>45%</td>
</tr>
<tr>
<td>Medical care at a hospital</td>
<td>43%</td>
</tr>
<tr>
<td>Nursing-home care</td>
<td>28%</td>
</tr>
<tr>
<td>American automobile</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: ACE
University Drivers

• Private sector forces
• Increased student demand and diversity
• Belief that costs are out of control
• **New competitors**
• Universities at risk
New Competitors

- Univ. of Phoenix
- US Open University
- WGU
- Sylvan/Calibre
- UNEXT
- Columbia Fathom.com
- NYU/for-profit
- CA Virtual U.
- Jones Int’l U.
- Motorola University
- MI Virtual Automotive U.
- Penn State World U.
- Mickey Mouse
- All of Us
Outta State U

Mukogawa Ft. Wright Institute (Japan)
Trajal Hospitality & Tourism College (Japan)
Univ. of Alaska S.E. (AK)
Eastern Oregon Univ. (OR)
Oregon Inst. of Tech. (OR)
Lewis & Clark College (OR)
Portland State Univ. (OR)
Univ. of Portland (OR)
Western Seminary (OR)
George Fox Univ. (OR)
Oregon State Univ. (OR)
Linfield College (OR)
Western Oregon Univ. (OR)
Chapman Univ. (CA)
Pacific Oaks College (CA)
Center of Innovation in Education (CA)
Pepperdine Univ. (CA)
Golden Gate Baptist Theological Sem. (CA)
Golden Gate Univ. (CA)
Apollo College (AZ)
Univ. of Phoenix (AZ)

Salish Kootenai College (MT)
Winona State University (MN)
Walden University (MN)
Univ. of Idaho (ID)
Lewis-Clark State College (ID)
Southern Illinois Univ. (IL)
ITT Technical Inst. (IN)
Vincennes Univ. (IN)
Johns Hopkins Univ. (MD)
Old Dominion Univ. (VA)
Webster University (MO)
Columbia College (MO)
Park College (MO)
Tulane University (LA)
Embry Riddle Aero. Univ. (FL)
Nova Southeastern Univ. (FL)
Kigezi Int’l School of Medicine (Uganda)

Source: University Business
Perspective from Wall Street

What determines the success of a nation?

In today’s economy: education.
Our Franchise at Risk

$680 billion per year on education:
9% of GDP and second largest industry

Compared to $1 trillion (13.2% GDP)
on health care and $270 billion on
defense (3.6% GDP)
Who is the Competition?
A Perspective from Wall Street

Exceptional revenue
and earnings potential

An enrolled student represents predictable, recurring revenue stream for a number of years
Bullish on Higher Ed

Education as a counter-cyclical industry:

*Job loss and career threats lead to increase in consumption of education*

Education will never go out of style:

*No threat of substitution or change in consumer tastes*

Value of face-to-face learning is substantial:

*Growth in distance learning will come from latent market of learners*
Competitive (Dis)advantages

- The campus experience
- The franchise
- Enormously talented faculty
- Major providers of basic research
- A stable core budget
- Relatively low cost and public’s belief that higher ed is a good investment

- Wrong financial model; no venture capital
- Slow to react
- Lack of public support for basic research
- Public emphasis on traditional workload measures which mitigates upon new teaching/learning models
- Import vs. export
Import vs. Export

“Whether a course could be delivered…from MIT materials might depend very much on the nature of the materials and the professors who would use them. In recent years, web-based course materials for…have been developed by one set of…faculty members and then ‘turned over’ to other faculty members so that they can have a turnkey course delivery system.”
“The results have been decidedly mixed. Many faculty dislike the perceived scripting of the courses and are annoyed that there is little room for ‘adding value’ to the material. Others feel the materials are suitable, but do not have any ownership of the material, and deliver the material in an automaton-like manner. Still others (primarily ones who dislike teaching in the first place) like having materials already prepared.”
University Drivers

• Private sector forces
• Increased student demand and diversity
• Belief that costs are out of control
• New competitors
• Universities at risk
Universities at Risk

- Proliferation/consolidation of e-learning
- Mission deflation
- Greater differentiation
- Top 25 courses

- Just-in-time re-tooling
- Mass customization
- OU-type teams?
- Bolt-on technology
Our Core Business

- Discovery (research)
- Transmission (teaching/learning)
- Campus experience as a differentiator
Our Core Business

*How does the most stable enterprise on earth respond?*

- Create a safe haven for creative destruction
- Make technology strategic
Invisible technology that is mission-critical, both tactical and strategic

- Has clear objectives with agreed upon costs and benefits
- Derives from university strategic priorities
- Provides greater access to students (time and place)
- Enhances student learning
- Supports student recruitment
- Markets the university
Strategic Technology

- Builds community
- Reduces staff demand
- Scales/leverages the faculty
- Simplifies rather than complicates the faculty’s job
- Allows faster and better decision making
- Enhances research capacity
- Has transformational potential
- Reduces travel
Strategic technology should advance teaching and learning by scaling/leveraging the faculty, by simplifying rather than complicating the faculty member’s job, and by increasing research capacity. The goal is not to replace faculty with technology but to free up valuable faculty time for those areas in which they make the greatest contribution.

I suspect the use of strategic technology means the same thing at many other institutions.
The Answer is Technology—Strategic Technology

Contact: Glick@asu.edu