Today’s agenda

1. Synopsis of four drivers creating market uncertainty

2. Review of e-business framework to provided a structured way to think about the market

3. Deriving lessons from examples of disruptive technologies in other industries

4. Strategies for the future

New technologies are potentially disruptive, unless their consequences are understood at the outset
Higher education is undergoing dramatic change

These trends are challenging the traditional models of education

- Demand
- Technology
- Capital
- New Entrants
Our knowledge economy fuels the need for lifelong learning

• The shelf-life of a degree is shrinking
• Pay gap is widening
• Number of skilled jobs rising, and yet...
  – 42 million adults are functionally illiterate
  – Only 21% of Americans over age 25 have a bachelor’s degree or better
• The employment “contract” no longer exists, driving more people to enhance skills to facilitate career switching
• Potential international demand is huge. For every hundred people on the planet, only one has a college education.

Source: Various
Student populations are becoming more diverse

- Corporate Learners
- Professional Enhancement Learners
- Degree Completion Adult Learners
- Personal Development Learners
- College Experience Learners
- Remediation and Test Prep
- Pre-College (K-12) Learners
Now, technology is enabling disruptive models

Increasing power of microprocessors enables software solutions to bandwidth constraints, e.g., compression

Broadband is coming. The technologies that will make fast consumer access to the Internet possible:

- cable modems
- xDSL
- wireless

Tools are maturing

- streaming audio and video
Technology enables high growth in distance education

Students Enrolling in Higher Education Distance Learning Courses, 1998-2002

Source: International Data Corporation
The competitive landscape is becoming increasingly specialized.
Here comes Phoenix...

Source: Chronicle of Higher Education, 10/23/98, University of Phoenix
Increasing competition from corporations

Competition is coming from unlikely sources such as corporations who invest heavily in their employees’ education.

Corporate Universities Up 10-Fold in 30 Years

11% of Fortune 500 companies have Chief Knowledge Officers
Even your colleagues are competing against you in new ways

Caliber Learning Systems has partnered with:
- Columbia University
- Georgetown University
- John Hopkins University
- University of Pennsylvania
- University of Southern California

UNEXT.com has partnered with:
- Carnegie Mellon University
- Columbia Business School
- London School of Economics
- Stanford University
- University of Chicago

Pensare has partnered with:
- Duke’s Fuqua School of Business
The potential for capital market growth is enormous

...just see what happened to healthcare

<table>
<thead>
<tr>
<th>Year</th>
<th>Health Care</th>
<th>Education</th>
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<tr>
<td>1970</td>
<td>% of GDP</td>
<td>8%</td>
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<td></td>
<td>% of Capital Market</td>
<td>3%</td>
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<tr>
<td>1994</td>
<td>% of GDP</td>
<td>14%</td>
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<td></td>
<td>% of Capital Market</td>
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Source: Merrill Lynch

Since 1994, 38 IPOs and 30 follow on offerings have been completed, raising $3.4 B in equity
Capital markets are responding to the unmet demand!

- S&P 500: 176%
- Education and Training Index: 134%
- Russell 2000: 54%

Source: Merrill Lynch
Higher education is undergoing dramatic change

- Demand
- Technology
- Capital
- New Entrants

Competition

What does it all mean?
It’s E-Business and it’s here

E-Business Transaction Value ($B) (US and Europe)

Source: eStats online
E-Business in Higher Education

Role of E-Business

Creation of Business Value

Enabler

Transformer

Most Organizations

Integration

Tactical

Strategic

Transformation

Convergence

Presence

Tactical

Integration

Strategic
Phase I: Presence

Role of E-Business

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Most Organizations

Most Organizations
Phase I: Presence

Drivers

• Every one is doing it

Examples

Purchasing
• Online description of purchasing procedures

Student Services
• Online catalog of University information

Learning
• Online syllabi and course information
Phase I: Presence

Benefits of “presence”
- Better informed customer
- Learned a lot about the Web

Unintended consequences
- Projects have low ROI
- Limited successes, popularity
- Projects remain isolated instances, rather than broad scale application
- Can lead to customer disappointment
Phase II: Integration

Most Organizations

Integration

Transformation

Convergence

Creation of Business Value

Role of E-Business

Enabler

Transformer
Phase II: Integration

Key drivers

• Do transactions -- real business
• Customer is taking control of the relationship
• Competition (with dot.coms and traditional competitors)
• Perception of cost benefit
• Get more money through extended reach. Really?

Examples

**Purchasing**
- E-Procurement

**Student Services**
- Web-enabled student services

**Learning**
- Distance education courses integrated with financial aid, online content, etc.
Phase II: Integration

Benefits of “Integration”
• Channel enhancement
• Increase service offering
• Reduce costs through closer relationships with partners and customer self-service
• Better customer information

Unintended consequences
• Channel conflict
• Higher than anticipated IT investment—across the value chain
• Lack of integration
• Not able to scale up to demand—lose user base
• Front office needs revamping
• Partnerships are challenging to manage
Phase III: Transformation

Creation of Business Value

Most Organizations

Integration

Transformation

Convergence

Role of E-Business

Enabler

Transformer

Most Organizations
Phase III: Transformation

Key drivers

- Defensive reaction to dot.com
- You know the customer so well, that you can anticipate needs
- 1:1
- Technology is here
- World is moving to real time, interactive, multimedia

Examples

**Purchasing**
- Full value procurement
- Just in time
- Eliminate WIP
- Event-driven fulfillment

**Student Services**
- Anticipate loan demand
- Anticipate graduation
- Anticipate future learning needs

**Learning**
- Educational paradigm shifts from “teacher-centric” to “learner-centric.”
Phase III: Transformation

Benefits of “transformation”
• Potential market dominance
• Lock-in customers and suppliers
• First mover advantage

Unintended consequences
• No one is safe
• Consolidation will happen
  – acquisition & exit
• Challenges institutional mission
• New entrants challenge existing incumbents
Phase IV: Convergence

- Integration
- Transformation
- Presence
- Most Organizations

Role of E-Business

Creation of Business Value

Enabler

Transformer
Phase IV: Convergence

Key drivers
• More of the same
• ????????

Examples
• Competing eco systems
• So married into the process chain that the business model as we know it today is gone
Higher education is undergoing dramatic change

Competition

Demand  Technology  New Entrants  Capital

How do I prepare for the future?
What is going to happen to you in 10 years?

And, how do you prepare for the future?

Source: McClure and Oblinger, NLII, 1999
The progress of disruptive minimill steel technology

Source: The Innovator’s Dilemma

Are there lessons for higher education?
Structure to avoid unintended consequences

1. Strategy
2. People & Skills
3. Processes
4. Systems & Technology
5. Performance Management
6. Delivery & Operations
7. Tax & Legal
8. Security

- Does the strategy address the emerging environment?
- What are the available skills?
- Do the processes support the strategy?
- How is performance measured?
- Does the infrastructure support the business?
- What are the tax & legal issues?
- What is our competence in security?
- Can we deliver?
Some cautionary notes to incumbents...

- Know what you want to do, where you want to play
- First mover advantage is huge, but is risky
- Speed is of the essence, but so is a well-conceived strategy
- Consolidation is coming and the middle will increasingly be “squeezed”
- Alliances are a necessity
- Goldman Sachs view—
  - Go to where you can get money
  - If you have a great idea, get it out of the institution, to catch the attention of Wall Street
- Above all, Step Boldly, Go Where No University Has Gone !!!!

Strategy is a process not a project
And remember:

“Everyone is potentially vulnerable…
It’s just a matter of timing”

J. Yaremchuck
VentureOne
E-Business is Business

E-Learning is Education