The Skills Needed for The Twenty First Century and Their Impact On Teaching and Learning in Higher Education

Teaching Through Simulation

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Need for Change

Changing World

Sharing Economy

New Generation of Students
Changing World

Vision | Understanding | Clarity | Agility
New Generation of Students

Baby Boomers
1946-1964

Gen X
1965-1979

Millennials
1980-1995

Gen Z
1996-2010

Social
Mobile
Global
Digital
Visual
Human attention = 8 seconds 
(vs. 12 sec. in 2010)
Knowing how to swim and being able to swim are two very different skills...

Can you imagine teaching swimming without access to a pool?
How can we adapt to better fit the instructional needs of our current students?
What skills do faculty need today to build an effective learning environment for university students?

• Technical skills
• Conceptual skills
• Interpersonal skills
The Capstone Business Simulation

Run $100 million electronic sensor manufacturing firm

Manage and coordinate decisions across four primary functional areas

- R&D
- Marketing
- Production
- Finance
Adjust product’s attributes to meet “Customer Criteria”

Create Price, Promotional Budget, Sales Budget, and Sales Forecast for each product

Determine schedules, capacity, and automation for each product.

Finance the company’s investments and make sure the cash position is positive at the end of the year.
The Marketplace:
A look into the Segments

ROUND 1

ROUND 8
Practice makes perfect

Practice makes permanent!

Only well supervised practice with constructive feedback makes perfect
Scoring Methods

Success Measures
- Cumulative Profits
- Average Market Share
- Average ROS (Return on Sales)
- Average Asset Turnover
- Average ROA (Return on Assets)
- Average ROE (Return on Equity)
- Ending Stock Price
- Ending Market Cap

Balanced Scorecard
- Measures company performance based on four perspectives
  - The Customer
  - Internal Business Process
  - Innovation and Learning
  - Financials
- In the simulation, a Proforma Balanced Scorecard is available to project results for the upcoming year.

Analyst Report
- Evaluates the company in ten categories:
  - Margins
  - Profits
  - Emergency Loans
  - Working Capital
  - Market Share
  - Forecasting
  - Customer Satisfaction
  - Productivity
  - Financial Structure
  - Wealth Creation
Each student individually submitted a 1500 words reflection paper including:

1. Evaluation of the Organization Performance
2. Evaluation of the Team Performance
3. Evaluation of Learning Outcomes
I never thought of myself to be a decision maker...

I am both encouraged and cautious about the idea of opening a new business or managing an existing one because...

I also very much valued working with other students I didn’t know...
In addition, I have learned how to read reports and analyze them in order to make a decision that will affect the future of a company.

After this experience, I believe in the power of good teamwork...

Overall it was an exciting new experiment and I highly suggest it to future business students!
Experiential Learning Through Business Simulations

- Moves from theory to application
- Excludes excessive judgment
- Fosters professional development with actionable feedback
- Encourages a real-world perspective
- Provides relevant content
- Introduces students to areas outside their comfort zones
<table>
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<tr>
<th>Setting</th>
<th>Learning Process</th>
<th>Responsibility</th>
<th>Method</th>
<th>Relevance for Job</th>
<th>Point in time</th>
<th>Integration</th>
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<td>Learning for/through individuals</td>
<td>Standardized</td>
<td>Externally controlled</td>
<td>Classroom teaching</td>
<td>Off-the-job learning</td>
<td>Learning now-usage in the future (or never)</td>
<td>Single channel</td>
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<tr>
<td>Team learning</td>
<td>Tailor made</td>
<td>Self directed learning process</td>
<td>Informal learning</td>
<td>Near-the-job and on-the-job learning</td>
<td>Learning on demand- 24/7</td>
<td>Omnichannel-learning Cloud/Social Media/Blog/Mobile</td>
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What will Decrease

What will Increase
Learning is experience. Everything else is just information.

-- Albert Einstein