The Future of Learning and Work
Bridging the Gap between Universities and Employers
Sun Microsystems Reports $1.7 Billion Loss and Falling Sales

By ASHLEE VANCE OCT. 30, 2008

MOUNTAIN VIEW, Calif. — With falling revenue, problematic acquisitions, product slips and a stock that has lost three-quarters of its value in the last year, Sun Microsystems is finding that Wall Street is losing patience.

The company, which makes computer servers, reported dismal sales and a large write-off Thursday — but otherwise announced no changes in a strategy that has so far failed to restore the luster that Sun had during the dot-com era.
S&P 500 companies will be replaced over the next 10 years
What Worries CEOs Most

<table>
<thead>
<tr>
<th>2018 top ten threats</th>
<th>2019 top ten threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Over-regulation</td>
<td>1. Over-regulation</td>
</tr>
<tr>
<td>42%</td>
<td>35%</td>
</tr>
<tr>
<td>2. Terrorism</td>
<td>2. Policy uncertainty*</td>
</tr>
<tr>
<td>41%</td>
<td>35%</td>
</tr>
<tr>
<td>3. Geopolitical uncertainty</td>
<td>3. Availability of key skills</td>
</tr>
<tr>
<td>40%</td>
<td>34%</td>
</tr>
<tr>
<td>4. Cyber threats</td>
<td>4. Trade conflicts*</td>
</tr>
<tr>
<td>40%</td>
<td>31%</td>
</tr>
<tr>
<td>5. Availability of key skills</td>
<td>5. Cyber threats</td>
</tr>
<tr>
<td>38%</td>
<td>30%</td>
</tr>
<tr>
<td>38%</td>
<td>30%</td>
</tr>
<tr>
<td>7. Increasing tax burden</td>
<td>7. Protectionism</td>
</tr>
<tr>
<td>36%</td>
<td>30%</td>
</tr>
<tr>
<td>8. Populism</td>
<td>8. Populism</td>
</tr>
<tr>
<td>35%</td>
<td>28%</td>
</tr>
<tr>
<td>9. Climate change and environmental damage</td>
<td>9. Speed of technological change</td>
</tr>
<tr>
<td>31%</td>
<td>28%</td>
</tr>
<tr>
<td>10. Exchange rate volatility</td>
<td>10. Exchange rate volatility</td>
</tr>
<tr>
<td>29%</td>
<td>26%</td>
</tr>
</tbody>
</table>
Lack of Key Skills is a threat to Growth & Innovation

- We are not able to innovate effectively: 55%
- Our quality or customer experience are impacted: 47%
- We are unable to pursue a market opportunity: 44%
Trends in the workforce
Automation, Digitization, Acceleration
4th Industrial Revolution
Work and Jobs are Changing

<table>
<thead>
<tr>
<th>Length of career</th>
<th>Average tenure in a job</th>
<th>Half-life of a learned skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 to 70 years</td>
<td>4.5 years</td>
<td>5 years</td>
</tr>
</tbody>
</table>
Re-Imagine Human Work

- Non-process-based
- Focused on creating value
- Fluid rather than predetermined
- Increasingly workgroup-oriented
- Context-specific rather than standardized
- Nonroutine

Source: Redefine Work – Deloitte Center for the Edge
Future Skills are Hard to Predict
## Skills in High Demand

<table>
<thead>
<tr>
<th>Power Skills</th>
<th>Technical Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>Cloud Computing</td>
</tr>
<tr>
<td>Communication</td>
<td>Digital Literacy</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Data Analytics/Visualization</td>
</tr>
<tr>
<td>Influence/Persuasion</td>
<td>Robotics/Automation</td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
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</tbody>
</table>
Most Important Skill? Learning Agility
The Workforce Chooses HOW they Learn

Q: Which of the following activities have you undertaken at least once in the past year for learning?
79% of learning comes from free or low-cost consumer content sources.
Q: What are your biggest obstacles to job-related learning or professional development?


Biggest Obstacles to Learning

- I don't have (or make) the time to learn: 43%
- Lack of guidance or direction in learning: 30%
- My company doesn't recognize or reward learning: 30%
- My manager doesn't encourage or enable learning: 22%
- I am overwhelmed by too many choices: 20%
- The learning at work is not engaging: 19%
- The learning at work is not relevant: 14%
- I don't know where to find learning opportunities at work: 11%
- I am not interested in learning more: 0%

Q: What are your biggest obstacles to job-related learning or professional development?
Technology is Changing How We Learn

Artificial Intelligence  |  Machine Learning  |  Virtual Reality  |  Personalization

Collaboration, content curation, video, mobile
How companies are preparing for skills in the Expertise Economy
JPMorgan Chase Makes $350 Million Global Investment in the Future of Work

Helping people develop critical skills for in-demand careers through new investments in education and training programs

Building a future-ready workforce at JPMorgan Chase by forecasting emerging employee skillsets, career pathways and upskilling opportunities

JPMorgan Chase today announced a $350 million, five-year global initiative to prepare for the future of work and meet the growing demand for skilled workers.

Building on the firm’s original, five-year $250 million commitment in 2013, this

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Amazon to Retrain a Third of Its U.S. Workforce

As technology reshapes roles, the online retailer plans to train 100,000 workers in new skills, from machine learning to nursing

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AT&T’s $1 billion gambit: Retraining nearly half its workforce for jobs of the future

Susan Caminiti, special to CNBC.com

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Accenture Commits $200 Million to Upskilling for the Digital Age

MAY 23, 2018 • UPSKILL AMERICA

UP SKILL AMERICA

EMPLOYMENT AND JOBS

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RECOMMENDED VIDEOS

1. Hong Kong Police
2. Adopt Tougher Taxis, Shewing Public Condernation
3. Why Gas Prices Very From Pump to Pump
4. In China, Breweries Tap Local Tastes to Win World’s Largest Beer Market
“There is a need to retool yourself, and you should not expect to stop. People who are not learning at least 5-10 hours a week on their own will obsolete themselves with the technology”

AT&T CEO
Randall Stephenson
Unilever Skills Strategy:

Upskill 160,000 across the globe
Upskilling Data Science

1. Our program begins with individual online assessment and pre-work

- Voluntary online data skills assessment
- Based on assessment, assigned pre-work on Udemy for Business
- Completion of online courses mandatory requirement to join 60-hour course
- Brought everyone up to speed and at the same level prior to course
Personalized learning + curated content

2. Personalized online learning pathways

- Worked with SMEs to curate personalized online learning pathways
- Degreed serves as front door & central location
- Leverage Udemy for Business online courses
- Individuals also rely on Udemy for Business Smart Recommendations engine

Data Science 5K
Practicing through hands-on projects

Blended learning model focuses on hands-on projects in the classroom

- Mini-projects – Hands-on learning opportunities to apply new skills
- Capstone project – Demonstrate mastery with presentation to leadership
Results on skills strategy: Moving the needle

Our pilot results: Application of skills

Empowering employees to apply data science fundamentals outside the classroom

- 75% of graduates know how to apply what they learned in class to their job
- 50% of graduates have seen a positive impact to job productivity
- 93.5% of graduates were scored as proficient or better in data science

Ultimate Goal: 5000 data scientists
E-commerce

The workplace becomes a learning place

Learning in the flow of work
How Universities are partnering with companies in Reskilling the Workforce
Tell me about your education or Tell me what skills you have?
1. Soft skills are the biggest gap area seen by employers (42% higher gap than technical skills)

2. Universities under-estimate the demand for technical skills by 300%

3. Universities over-estimate the need for soft skills by 30%

4. Universities are almost twice as confident about workforce skills than employers

Employers are 42% more worried about soft skills than technical skills

Well prepared: 35%
Missing soft skills: 34%
Missing hard skills: 24%
Missing both types of skills: 7%
Monterrey, Mexico

The learning place becomes a work place

Helping solve real problems for companies
Skills and/or Degrees

MicroMasters Programs are a Pathway to Today's Top Jobs

MicroMasters programs are a series of graduate level courses from top universities designed to advance your career. They provide deep learning in a specific career field and are recognized by employers for their real job relevance. Students may apply to the university offering credit for the MicroMasters program certificate and, if accepted, can pursue an accelerated and less expensive Master's Degree.

Recognized by Industry Leaders
Skills are the currency
In the Expertise Economy
A Skills Strategy helps upskill and reskill the workforce of the future.
What Skills Do You Have?

**Employees**
- What are my job or career goals?
- How can I measure and prove my skills?
- Where can I best build the skills I need?
- Where am I strong or weak?

**Business leaders**
- What skills do we need?
- What will best build those skills?
- How are we doing?
- Where are we strong or weak?

**CEOs**
- Do we have the skills we need to win?
Skills Tied to Opportunities

**Supply**
- Professional Associations
- Consultants
- Gig
- Freelance
- BPO
- Higher Ed
- Self-Directed Learners

**Demand**
- HR
- Recruiters
- Workforce Planning
- Job Boards
- Full Time Employers
- Contract Based Employers
- Part Time Employers

They Have Skills → You Need Skills
Imagine Preparing the Future Workforce

More skilled
More engaged
Creating more value

Source: Redefine Work – Deloitte Center for the Edge
Value for Educators, Companies, and Individuals

Increase

Well-being
Innovation
Value Creation
“With the world moving as fast as it is, we need to become a society of people who are always learning new things.”

Julie Friedman Steele
Board Chair of the World Future Society

Thank you!