



ROBINS
School *of* Business

On Globalization, Innovation and Technology

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Purpose

- Perspectives on the current and future state of corporate America
- A challenge to think about the future of corporate America in this ever changing global environment

Purpose (Cont'd)

- Academics – a viewpoint about curriculum design and experiential learning
- Business people – challenges and opportunities for corporate America
- All – explore ways to partner for mutual benefit and social and business impact

Purpose (Cont'd)

- The ideas are presented in the context of:
 - Crisis we so often hear about,
 - Real crisis that we do not hear enough about,
 - Addressing these issues through innovative business education,
 - Importance of the practitioners,
 - Conclude with how we are incorporating some of these ideas at the Robins School

The Argued Crisis: The Need for Engineers and Scientists

- There is a crisis that we are continuously hearing about: the shortage of engineers and scientists in the US is hindering our ability to compete globally

The Argued Crisis: The Need for Engineers and Scientists (cont'd)

- *Virginia Business Magazine*, article titled "Bridging the Gap"
 - The decline of students in Mathematics and Science at a time when the numbers of engineers and scientists in countries like China and India are skyrocketing

The Argued Crisis: The Need for Engineers and Scientists (cont'd)

- *Newsweek* and *Business Week* also just recently cited the following staggering statistics:
 - China and India combined graduate each year over thirteen (13) engineers for every engineer in the US.
 - For the cost of one (1) chemist or engineer in the US, a company can hire five (5) in China and eleven (11) in India.
 - One chemical plant is being built in the US for every fifty (50) in China.

The Argued Crisis: The Need for Engineers and Scientists (cont'd)

- With increased technologies and expanded air travel, the world is more open to competitors than it has ever been
- There are an estimated three (3) billion new capitalists around the world and a limitless supply of low skilled workers who are poorer and hungrier for work.
- These individuals are not just competing with Americans for their jobs, they are taking those job

The Argued Crisis: The Need for Engineers and Scientists (cont'd)

- Through sheer numbers and economics, we are fighting a losing battle if our primary emphasis is SOLELY on growing our engineers and scientists to compete

The Obvious Solution

- **Instead**, for American corporations to retain their competitive edge, renowned books such as Thomas Friedman's *The World is Flat* and Dan Pink's *A Whole New Mind* continuously cite innovation as the key to American companies to continue to lead the way

The Obvious Solution (Cont'd)

- Finding better, faster and cheaper ways to create new products and services, or deliver existing ones, are at the core of everyone's competitive growth strategy

The Obvious Solution (Cont'd)

- Innovation is necessary in numerous areas
- Arguably, among the most important
 - New product and service development
 - The processes and technology for their manufacturing, distribution and delivery

The Obvious Solution (Cont'd)

- Another area of innovation is organizational structures to enhance creativity, communication, innovation and efficiency
- Innovative approaches for the use of the vast amounts of data available
 - Real-time decision making for reaching and attracting customers, tracking customer satisfaction, forecasting and anticipating customer needs, among many others
 - Strategic planning

The Obvious Solution (Cont'd)

- Another area of innovation is strategic partnerships for companies
 - Can be directed at increasing local, regional and even international presence
 - Increasing the offerings in products and services, as well as customer service
 - While minimizing the need for large investments in money and resources.

The Challenge

- In IBM's recently released Global CEO Study 2006,
 - Two thirds of the CEOs state they are going to make fundamental changes to business
 - The reasons: intensified competition, escalating customer expectations, unexpected market shifts, workforce issues, technological advances, regulatory concerns and globalization
 - Less than half think their organizations handled such changes with much success

The Challenge (Cont'd)

- Recent article, Harvard Business School
 - After two decades of corporate globalization, organizations are still struggling to find managers comfortable and effective in this growing global economy
 - Managers must believe differences matter, have openness to new/different ideas, and understand both the “hard” and “soft” sides of the business
 - “Soft”, people skills (cultural awareness & open-mindedness) are increasingly important as companies expand across borders

The Real Crisis

- Arguably, technology, innovation and globalization are the top three issues facing American corporations
- The crisis that that virtually no one is addressing is the need to create the future business and technology leaders how to successfully lead organizations through the integration of technology, innovation and globalization.

The Real Crisis (Cont'd)

- Not technology and globally aware and savvy business managers, but practitioners capable of leading the way, effecting and managing change, and are able to take advantage of the intersection of technology, globalization and innovation.

The Real Crisis (Cont'd)

- Education and training tends to concentrate on each of these areas independently
- Students and managers are learning and operating in silos within each of these subject matters
- The key is to rather train our future leaders how to efficiently integrate these critical issues best business and technology decisions

The Real Crisis (Cont'd)

- That is the crisis that I propose we give as much importance as the crisis of science and technology education
- If not developed at par, who is going to lead the way?

Mindset Required

- Visionary
- Technology Dexterous
- Context Builder
- Skilled Manager
- Global Thinker
- People Person
- Systems Thinker

Intended Results

- Effective leadership is required to see beyond the existing paradigm,
 - Identify the limitations imposed by the employees' mindset, versus technological boundaries versus the limitations imposed by the existing practices and procedures
 - Then, people skills are essential to convince and move into action all the parties involved

Intended Results (Cont'd)

- The leader must be effective across units, functional responsibilities and even geographical locations
- Intellectual diversity is required
 - The ability to interact with people from different disciplines, cultures, responsibilities and seniority levels, among many others, to effect organizational change

Intended Results (Cont'd)

- Perhaps, the biggest challenge is to have the right mix of technical and people skills to effectively lead the organizational cultural change so that employees at all levels and around the world would embrace the change, rather than sabotage the new systems
- That is the type of global business leader required to maintain our companies in the forefront of business innovation and competitiveness

Vision

- Continuous definition of vision
- Vision will effectively keep them focused
- Requires discipline and openness to constantly challenge assumptions in order to become more effective and productive
- Successful companies require a vision shared by all its employees

Systems Mind-set

- Incorporates all the components into a single model
- Integrated approach to technology, scientific approaches to its design and the people who will design and execute these systems
- To stay competitive requires our acceptance of what it is in terms of the business opportunities and limitations
- Individuals can fully access their power to reinvent themselves, take advantage of the available technology, build team and become increasingly creative and productive

Role of Academia

- Education is called and required to strive to teach all our students how these three critical issues of globalization, technology and innovation affect and impact their company and their area of concentration
- How they can utilize this information to make the best and most informed business decisions possible to lead their organizations in this ever changing global economy

Role of Academia (Cont'd)

- Traditional curricula is based a collection of courses. Related to entrepreneurship and innovation, courses and topics may include:
 - Entrepreneurship
 - Innovation
 - Business Plan Development
 - Venture Capital
 - Emerging Technologies
 - New Venture Creation and Management
 - New Product and Service Development
 - Commercialization of New Products, Services, and Technologies

Horizontal Curricula

- Curriculum integrates the material for the students in the courses or via other also innovative approaches, such as experiential learning. This approach helps create the “integrated mindset” needed by the aforementioned business and technology leader

Horizontal Curricula (Cont'd)

- The MBA at the Lally School of Management and Technology at Rensselaer
 - Five streams of knowledge
 - *E.g., Creating and Managing an Enterprise*
 - Short modules
 - *E.g., Leaders and Heroes*
 - *Managing on the Edge*

“Hybrid” Curricula

- The educational experience—although it includes some horizontal integration embedded in the course work—it primarily relies on co-curricular and extra-curricular activities for its horizontal integration

“Hybrid” Curricula (Cont’d)

- The UG and MBA Programs at the Richmond Robins School of Business
 - SMIF
 - MBA International Residency
 - International Exchange Program

“Hybrid” Curricula (Cont’d)

- McIntire School of Commerce at the University of Virginia
 - Integrated Core Curriculum—Two semesters, third year
 - The two semesters are divided in six sessions of business theory and practice where students tackle and solve a real problem
 - The sessions are team taught by faculty and business leaders using a multi-disciplinary, cross-functional approach

Role of Academia (Misc)

- Strategic Partnerships
- Learning Space

Role of the Practitioners

- Recent scandals in large American corporations
- For years (prior) organizations are becoming increasingly “flatter” and “leaner”
- The lines of responsibility between executives and managers are becoming more “fluid” (less rigid) with some overlap and cross-functionality

Role of the Practitioners (Cont'd)

- Adding to the demands are increasing opportunities and competition of a global economy
- Industries and markets are also becoming increasingly complex and competitive in a global supply chain
- Practitioners at all levels must stay abreast of business trends, new technologies, market opportunities, as well as the associated competition

Role of the Practitioners (Cont'd)

- Practitioners must now be strategic and analytical thinkers in determining how, where, what and who can lead their organizations into this ever-changing future
- Deep understanding of the key issues cited of globalization, technology and innovation
- But most importantly understand how each of these areas interacts and complements not only one another, but each of the areas of your company

Professional Education

- Revolves around a commitment to life-long learning
- Numerous companies have built in-house learning programs
- Companies also continue to rely on universities for professional education and training
 - The traditional approach to recruiting future executives is by hiring MBA graduates or
 - Sponsoring their employees to pursue an MBA degree
 - A more recent trend is specialized advanced degrees such as a masters degrees and even doctoral degrees

Professional Education (Cont'd)

- Leadership development is another area of growth in educational programs
 - Help “fill the gap” between junior and mid-level management and senior executives
- Professional development is becoming increasingly important and essential for senior professionals

Professional Education (Cont'd)

- Executive Education Programs at the Richmond Robins School of Business

Role of the Business and Academic Partnerships

- Open Enrollment
- Customized
- On-line instruction for professional development and even for certification development
- Numerous universities are providing on-line degrees such as the MBA
- “Live” Education
- As companies continue to become global distance learning and education is becoming increasingly popular

Conclusion

- It's All About the People

ROBINS SCHOOL HONORS

BusinessWeek Top 25

- **Criteria:**
 - Academic Quality
 - Starting Salaries
 - Recruiter Survey
 - Student Survey
 - MBA Feeder Schools
- **A+ in Teaching Quality**
- **A for Job Placement**
- **A for Facilities**
- **Ranked #4 in Academic Quality**





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