How Universities can aid the Transition

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How I became involved with overseas universities

• I was serving as president of the American Society for Cybernetics
• To bring American scientists together, I arranged meetings with Soviet scientists
• After the USSR collapsed, I began working with young scientists from the FSU
• GWU has hosted over 150 young academics
Ukraine
I shall discuss how to

• Increase international cooperation in education, research and service
• Develop new sources of revenue
• Improve organizational efficiency through process improvement methods
• Use new teaching methods such as service-learning
Fundamental changes are occurring in universities

- Universities have existed in most countries for many years
- Some travel by students and faculty has been common for many years
- But several trends, occurring at the same time, are having a dramatic effect on the way universities operate
Current Trends
Trends that are creating a global network of universities

• The internet
• The Bologna Process is standardizing university course credits, degrees, and procedures
• More and more faculty and students are gaining international experience
• Widespread use of the English language
• Both competition and cooperation among universities
Universities are striving to

- Improve contacts with other universities
- Find new sources of funding
- Promote faculty development
- Improve university infrastructure
- Encourage research and service in addition to education
- Increase faculty involvement in university administration and curricula design
Competition among universities
Increased competition due to

- New private universities
- Branches of Western universities in other countries, for example New York University in Tirana
- Distance education courses and degrees
- Ratings of universities
Consequences of competition

• Universities compete for faculty by offering higher salaries
• Faculty, who have more choices in where to work, want better working conditions and involvement in administrative decisions
• When students pay tuition, they expect higher quality instruction
Cooperation among universities
Aid for developing new degree programs

- Some governments, such as the U.S., U.K. and Germany provide grants for establishing new degree programs (e.g., an MBA program in Sarajevo, Bosnia)
- For a few years students receive degrees from both universities to help establish the program
- Faculty members in both countries learn about the other country
More student and faculty exchanges

• Increasing numbers of students now travel abroad for a semester, a summer or short study tours
• Faculty frequently attend international conferences
• Faculty learn how other universities work and take ideas home
New Sources of Funds
New sources of funds for universities

- Charge tuition
- Develop contacts with corporations so they will support university research
- Submit more proposals for research grants
- Sell objects that use the university name – T-shirts, sweaters, coffee mugs, pens
- Begin an endowment
Creating an endowment

• An endowment consists of money given to a university by wealthy alumni
• The endowment produces income in the form of dividends and interest
• About half of the income is put back into the endowment each year so it continues to grow
• About half is spent on student scholarships, faculty research and travel and other activities
Size of endowments

• Harvard University’s endowment is about 30 billion dollars
• About 25 universities have endowments greater than 1 billion dollars
• GWU employs more than 100 people who only work on increasing the endowment
Effect of endowments on competition among universities

• Universities around the world are now competing with each other for the best students and faculty

• A university with a large endowment can afford better facilities and can support research and travel
Process improvement methods
History of process improvement methods

- Were developed in the U.S. in the 1930s
- Were used in Japan after World War II to improve quality and productivity
- Since 1980 have been adopted in Europe
- Use the scientific method to improve production activities
- Can be used in education, government and health care, not just manufacturing
THE DEMING FLOW DIAGRAM

Suppliers of materials and equipment

Receipt and test of materials

Design and redesign

Tests of processes, machines, methods, costs

Production, assembly, inspection

Consumers

Consumer research
Name two or three of your most important CUSTOMERS and what you or your group provides:

<table>
<thead>
<tr>
<th>My customers:</th>
<th>What I provide them:</th>
<th>Is there a quality gap between what I provide them and what they want?</th>
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Worksheet

Supplier Model

Name two or three of your most important SUPPLIERS and what they deliver or provide to you or your group:

<table>
<thead>
<tr>
<th>My suppliers:</th>
<th>What they provide me:</th>
<th>Is there a quality gap between what I get and what I want?</th>
</tr>
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<tbody>
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The Concept of Two Processes

I. The Production Process:
   The way we produce output.

II. The Improvement Process:
   The way we change process number 1.

“People must be given time to work on the process, not just in the process.”

R. Reid
FOCUS-PDCA

1. **Find a Process to improve**
2. **Organize a Team That Knows the Process**
3. **Clarify Current Knowledge of the Process**
4. **Understand Sources of Process Variation**
5. **Select the Process Improvement**

*Data for process Improvement:
- Customer view
- Worker view
- Lessons learned

- **ACT**
  - To hold gain
  - To continue improvement

- **PLAN**
  - Improvement
  - Data collection

- **CHECK**
  - Improvement
  - Data collection
  - Data analysis

- **DO**
Fourth Generation Management

GETTING BETTER FASTER
As quality improves, costs decline

\[
\text{Total costs} = \text{Cost of producing goods or services} + \text{Cost of producing waste or errors} + \text{Cost of doing quality improvement}
\]

SAVE HERE

SPEND HERE
Reduce Chronic Waste

MATERIAL
• SCRAP
• EXCESS INVENTORY
• INSPECTION EQUIPMENT
• TEST EQUIPMENT
• POOR MACHINE UTILIZATION
• ENERGY
• LOST OR MISPLACED MATERIAL
• OVER AND UNDER SPECIFICATIONS
• EXCESSIVE EQUIPMENT

PEOPLE’S TIME
• REWORK
• INSPECTION
• CHECKING
• CLARIFYING
• PRODUCING WASTE OR POOR QUALITY
• INEFFICIENT MEETINGS

LOST SALES
• POOR QUALITY PRODUCTS/SERVICES
• NOT RESPONSIVE TO CUSTOMERS NEEDS
• POOR CUSTOMER SERVICE
• POOR ENGINEERING

CUMULATIVE

CAPITAL
• INVESTMENTS
• WARRANTY COST
• LIABILITY COST
• IDLE EQUIPMENT
• DEPRECIATION

$
Return on TQL investment at Naval Air Warfare Center Aircraft Division, Lakehurst, New Jersey.
Figure 7. Savings associated with productivity gain sharing at the Naval Aviation Depot, Cherry Point, North Carolina.
The Deming Chain Reaction

Improve Quality → Costs decrease because of less rework, fewer mistakes, fewer delays, snags → Productivity improves

→ Capture the market with better quality and lower price → Stay in business → Provide jobs and more jobs
A manager who fails to provide resources and time for prevention activities is practicing false economy.

Concentrate on Prevention, Not Correction.

Prevention has more leverage when improving quality.
What is Different?
The New, Excellent Organizations Concentrate on Process, not on Problems

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>PROCESS</th>
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</thead>
<tbody>
<tr>
<td>Motivate People</td>
<td>Remove barriers</td>
</tr>
<tr>
<td>Who is wrong?</td>
<td>What is wrong?</td>
</tr>
<tr>
<td>Define: responsibility</td>
<td>Define: procedure</td>
</tr>
<tr>
<td>Watch bottom line</td>
<td>Watch quality</td>
</tr>
<tr>
<td>Measure people</td>
<td>Measure systems</td>
</tr>
<tr>
<td>Define job</td>
<td>Define customer</td>
</tr>
<tr>
<td>Fix deviations</td>
<td>Reduce variability</td>
</tr>
<tr>
<td>“Do your job”</td>
<td>“Can I help you?”</td>
</tr>
<tr>
<td>“Obey orders”</td>
<td>“Improve things”</td>
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</table>
Service-learning: a new method of instruction
A definition of Service-Learning

Service performed by students, aimed at attending to a real need of the community and oriented to enhance the quality of academic learning
Characteristics of Service Learning

• Crosses all levels of schooling
• Is relevant to all academic and professional disciplines
• Is connected to a wide range of social issues
• Empowers students and educational institutions to become aware of and engaged in local communities
Graduate management students

• Work as consultants to NGOs, government agencies, or businesses improving a process and teaching process improvement methods
• Group projects are the “laboratory” part of the course
• The client is a second instructor
• Students learn about organizations from inside
Service Learning as a pedagogical method is new

- It arises when modern economies are becoming more knowledge intensive
- It is an effort to couple the knowledge creating activities of universities to the community
- Universities are helping to revitalize neighborhoods
Current trends in pedagogy

• From an emphasis on teaching to an emphasis on learning
• From the instructor as an expert to the instructor as a coach
• From a focus on disciplines to a focus on real world problems
• From individual learning to collaborative learning
SL has a positive effect on

- Student personal development
- The ability to work well with others
- Sense of social responsibility
- A student’s academic learning
- An ability to apply what was learned
- Complexity of understanding, problem analysis, critical thinking
Colleges report SL has a positive effect on

- Stronger relationships among faculty
- Student satisfaction with college
- Student retention
- The likelihood of graduation
- Good community relations
More information on service-learning

- Students in management can engage in service-learning by acting as consultants for organizations
- Examples of past student reports
- Short descriptions of many student projects
- www.gwu.edu/~rpsol/service-learning
A keynote address prepared for a conference on Management Challenges During Transition

University of Tirana
Tirana, Albania
April 28-29, 2009
Conclusion

• Universities are cooperating to improve education and research
• They are competing in order to rise in rankings
• Endowments provide additional funds
• Process improvement methods are a way to improve the performance of organizations
• Service learning is a new teaching method that benefits students, clients, and universities
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