

SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE
SCHOOL OF BUSINESS

Management 553: Seminar in Quality and Performance Management
Three Semester Hours

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Course Catalog Description: Current topics in management, with special emphasis on designs, programs and techniques for managing quality and performance improvements. Advanced readings and cases on innovative business practices. Prerequisite: MGMT 514 or equivalent .

Course Overview: Over the past two decades, quality has gained increasing attention as a key to organizational performance and competitiveness. In that time, the approaches and tools for managing quality have evolved from a focus on statistical formulas for acceptance sampling to describing the broader cultural and managerial changes that are required to improve quality. These changes have included the Baldrige National Quality Award, ISO 9000, Six Sigma and Lean Production. At the same time, the range of organizations using quality management techniques has expanded from manufacturing operations to include service operations, and educational and governmental organizations.

The focus of this course is to familiarize students with both the managerial and technical aspects of quality management. This includes approaches for product and process design and process control. It also involves the integration of quality management throughout the organization.

Course Goals: This course will strive to achieve the following specific goals:

1. To introduce students to the evolution of approaches in the field of quality management.
2. To teach some of the analytical techniques of quality management. These include process control charts, capability assessment and the Taguchi loss function.
3. To provide students with an understanding of the factors that influence quality and the methods organizations use to manage these factors.

Course Resources:

- Michael Brassard & Diane Ritter, The Memory Jogger II, A Pocket Guide of Tools for Continuous Improvement and Effective Planning First Edition, Goal/QPC, Salem, NH, 1994.
- Harvard Publishing. Several Harvard Cases will be used to cover material in the course. The website to obtain these cases is located at: <http://harvardbusinessonline.hbsp.harvard.edu/relay.jhtml?name=cp&c=c04693> . If you have not registered with Harvard Business Online for a previous course, you will be required



to do so. This URL will provide you with a list of required materials for use in this course. You will have immediate access to the materials upon placing your order. For subsequent access, you must login to <http://harvardbusinessonline.org>.

- The Mgmt 553 Blackboard site (<http://bb.siue.edu/>) is an important source of information. It will contain readings, lecture outlines for each class topic and relevant web sites to assist you in class preparation.
- Malcolm Baldrige National Quality Award Criteria. You can download the 2007 criteria from the NIST web site (http://baldrige.nist.gov/Business_Criteria.htm). We will be covering the MBNQA during the second weekend of the course so you will not need the criteria until then
- Additional course material will be handed out in class.

Course Grading: Course grades will be based on mid-term and final examination scores, individual written assignments and class participation. Examination scores will determine 50% of the final course grade. Class preparation and participation (including case write-up assignments) will determine the other 50% of the final course grade. The course grade breakdown is as follows.

Midterm Exam	25%
Final Exam	25%
Individual Written Assignments	40%
Attendance and Participation	10%

Examinations: There will be two examinations held during the course: a mid-term and a non-comprehensive final. Each exam will be worth 100 points. Problems, essay questions, mini-cases and short-answer questions will be used on the exams to assess your knowledge of course topics.

Individual Written Assignments: There will be four individual written assignments over the term. Each weekend you will submit a case analysis and an article summary. There will be a sign-up on Blackboard so that all of the cases are covered. I will randomly assign articles for the article summary.

Case Analysis

Each weekend, you are expected to provide an analysis of one of the cases discussed in class in the form of a 3 to 5 page memo. The memo should address the questions you are asked to analyze as a part of the case.

In preparing your memo, you should remember that you are a highly-paid consultant. The value you add to earn your fee is in your analysis of company (case) data and information. It is not sufficient for you to just repeat information from the case. You must provide analysis. For quantitative data, this may mean performing calculations to show trends or patterns. For qualitative information, it means that you should explain how and why the information is (or is not) important to the company or situation.

In addition to analysis, it is important for you to clearly explain and justify any recommendations you make. If you recommend, for example, a new approach to quality management you should explain how you arrived at the recommended change and why you think that the change would be beneficial. In some cases, it would also be wise to recognize risks associated with your recommendation and explain why those risks are outweighed by the benefits of the recommended plan.

As in the business world, the quality of your work will also be judged based on the quality of the presentation. The grammar, spelling and organization of your memo will also be assessed in the determining the quality of your work. Each memo will represent 15% of your final grade.

Article Summary

Each weekend, you are also expected to provide a 1 to 2 page summary of one of the articles discussed in class. (In class, you will also be the discussion leader for this article. Additional information on discussion leader is provided under Class Participation.) The memo should address the questions you are asked to think about as you read the article. The summary should also address any particular strengths or weaknesses in the paper. Each article summary will represent 5% of your final grade.

The assignments are to be typewritten/word processed. Be sure to carefully proofread your paper. Cases will be handed in at the beginning of class. Late assignments will not be accepted.

Class Participation: This will be decided based on your overall contribution to class. Desirable contributions include asking intelligent questions on the material, answering questions on the material and participating in discussions of cases and articles. To be successful, being prepared with the reading assignments is important. You will also have the opportunity to post questions and discussion points on the bulletin board in the Blackboard site. Questions and discussion about course topics will contribute to your participation grade as well.

In addition to your overall contribution to class discussion, you will be required to be the discussion leader for one article each weekend. The discussion leader can choose any method to conduct the discussion. The priority is to develop an understanding of the information the writer is trying to convey.

In judging your performance in class participation, keep the following words of one of my former colleagues in mind, “breathing without the assistance of a classmate does not provide a contribution.” Your presence in class and frequent log-ons to Blackboard are the baseline from which I begin grading class participation. C level participation consists of answering questions I pose to you, asking a few questions voluntarily, and participating in class exercises. B level participation consists of achieving C level participation plus making thoughtful comments and asking insightful questions throughout class and/or on the Blackboard bulletin board. To earn an A, you must consistently provide insights into the material and add relevant comments and examples that facilitate class learning.

One warning, do not confuse quantity of contributions with quality of contributions. You are not required to produce a specific amount of “air time” or a specific number of postings for participation.

Management 553 Blackboard Site: Blackboard is a web-based course management system. It provides valuable tools for communication and information sharing. In the Blackboard site, you will be able to download class notes and homework problems. The private e-mail on Blackboard will allow you to directly contact your classmates and me with questions about the course. You will also be able to post questions and discussion comments on a bulletin board.

Everyone in Management 553 is **required** to participate in Blackboard. You may access Blackboard by going to: <http://bb.siue.edu/>. To log onto Blackboard, you must have an active SIUE e-mail account. If you do not have an SIUE e-mail account, the Office of Information Technology provides e-mail accounts (<https://oitam.isg.siue.edu/~eid/cgi-bin/e-ID>). Your initial Blackboard login will be your SIUE e-mail identifier. For example, mine is lswanso. Your password is your SIUE e-mail password.

Academic Dishonesty: Academic misconduct includes cheating, plagiarism, falsification of records, unauthorized possession of examinations, intimidation, and any other action that may improperly affect the evaluation of your performance. Academic misconduct also includes assisting others in any such acts. Penalties for academic misconduct may range from grade penalties (including a zero for an assignment or examination, or failing a student for the course) to official disciplinary action including notification of the Provost's office. For more information see the Student Academic Code (<http://www.siue.edu/POLICIES/3c2.html>) and the university policy on plagiarism (<http://www.siue.edu/POLICIES/1i6.html>).

Classroom Expectations: For some students, the quantitative material in this course is quite challenging. I am committed to assisting students overcome these challenges and welcome visits during my office hours or by appointment. To achieve the most efficient use of our time, I expect you to have read the material and attempted the problems prior to coming to my office. If you have not prepared the material prior to visiting my office, I may ask you to postpone our appointment until you have had the chance to study it.

I also expect you to act in a professional manner in this class, and I will act in the same manner. Professional behavior implies honesty, respect and preparation. This includes arriving for class on time, being prepared and staying for the entire class period. It also includes coming to class prepared to discuss the material assigned for the day. Finally, professional behavior includes submitting work that is neat, proofread, and consistent with the prescribed format.

TENTATIVE COURSE OUTLINE:

Topic

Assignment

SESSION 1

Evolution of Quality

"The Long and Winding Road: The Evolution of Quality Management" Blackboard Article

1. What were the major eras in the evolution of quality?

Definitions and dimensions of quality

"Competing on the Eight Dimensions of Quality" Blackboard Article

1. What are Garvin's dimensions of quality?
2. How would you add to these dimensions?
3. What are the strategic implications of the dimensions of quality?

Philosophies of quality

"A Note on Quality: Views of Deming, Juran and Crosby" Harvard Publishing

1. How do the views of Deming, Juran and Crosby compare?
2. In what settings is each approach likely to be successful?
3. What problems is each approach likely to encounter?

Quality Costs

"Cost of Quality" Freequality.org website under Knowledge: SQC/Inspection/Testing

(<http://www.freequality.org/Default.aspx?page=26>)

1. What are the categories of quality costs?
2. From your experience, give an example of each category.
3. What are some of the measurement indices for quality costs?

"Quality cost models and their application: a review" Blackboard Article

1. What are the four cost models?
2. What is distinct about each model?
3. What are the commonalities of the models?

"Applying Cost of Quality to a Service Business" Blackboard Article

1. How does Xerox's COQ differ from the traditional classification of quality costs?
2. What factors contributed to the program's success?
3. What are the primary difference between applying the cost classifications to manufacturing and service operations?

Case: Steinway & Sons: Buying a Legend

Questions for Steinway and Sons Harvard Publishing:

1. What accounts for Steinway's reputation as a manufacturer of high-quality pianos?
2. How does Steinway's strategy compare with that of its major competitors?
3. What do you think of Steinway's 1992 decision to launch the Boston line of pianos? What impact might this new line have on the company? Having just purchased the company in 1995, what should Messina and Kirkland do with the Boston piano line?
4. Moving forward, what is Steinway & Sons biggest strength? How can it best be leveraged? What is Steinway & Sons biggest weakness? How can it be minimized or eliminated?

SESSION 2

Process Quality

The "Seven" Traditional Tools of Quality from "The Memory Jogger II"

1. Cause and Effect Diagram pp. 23-30
2. Check Sheet pp. 31-35
3. Control Charts pp. 36
4. Flowchart pp. 56-62
5. Histogram pp. 66-75
6. Pareto Diagram pp. 95-104
7. Run Chart pp. 141-144
8. Scatter Diagram pp. 145-149

"Process Mapping" and "Mapping Yields Manufacturing Insights" Blackboard Articles
Constructing and Using Process Control Charts from "The Memory Jogger II" pp. 36-51
"Process Capability" from "The Memory Jogger II" pp. 132-136

The Seven New Tools of Quality from "The Memory Jogger II"

1. Activity Network Diagram pp. 3-11
2. Affinity Diagram pp. 12-18
3. Interrelationship Digraph pp. 76-84
4. Matrix Diagram pp. 85-90
5. Prioritization Matrices pp. 105-114
6. Process Decision Program Chart pp. 160-162
7. Tree Diagram pp. 156-164

Questions for Excel Logistics (Harvard Publishing) are included in the case



SESSION 3

Design Quality

"Manufacturing by Design" Blackboard Article

1. In designing a product, what specific steps does the team need to undertake?

"Implementing Concurrent Engineering" Blackboard Article

1. What is concurrent engineering?
2. How does it compare with sequential engineering?
3. What are the benefits of concurrent engineering?
4. What are some obstacles to successful implementation of concurrent engineering?

"Robust Quality" Blackboard Article

1. What does robust quality mean?
2. What role does consistency play in achieving high quality?
3. What is the role of variation in assembly (stack up)?
4. How does application of Taguchi's loss function contribute to robust quality?
5. What implications does "robustness" have on employee training?

"Product design for manufacture: Design for disassembly" and "Design for assembly: a critical methodology for product reengineering and new product development" Blackboard Articles

1. What are Design for Manufacture and Design for Assembly?
2. How can DFM and DFA contribute to product quality?
3. Are there any disadvantages or tradeoffs to these approaches?

"The House of Quality" and "How Puritan Bennett Used the House of Quality" Blackboard Articles

1. What is Quality Function Deployment (House of Quality)?
2. What are the benefits of QFD?
3. What are the steps involved in generating a House of Quality?
4. How did Puritan Bennett use the House of Quality?
5. What benefits did Puritan Bennett experience as a result of using the House of Quality?

SESSION 4

Service Quality

"A Conceptual Model of Service Quality and Its Implications for Future Research" Blackboard article Blackboard Article

1. What are the differences between services and manufacturing?
2. What are the dimensions of service quality? How do they compare with Garvin's dimensions of quality?
3. What are the proposed gaps in service quality?
4. How do these gaps contribute to customer (dis)satisfaction?

"Zero Defections: Quality Comes to Services" Blackboard article

1. What are the costs of losing a customer?
2. Why is zero defections an important concept in service management?
3. What are the issues involved in defection management?
4. What are the roles of leadership and employees in managing customer defection?

"The Power of Unconditional Service Guarantees" Blackboard article

1. Why and how do service guarantees work?
2. What are the characteristics of a good guarantee?
3. What are some of the reasons that make service guarantees difficult to use?

"A Journey to the Truth: Achieving 'Top Box' Customer Satisfaction at Enterprise" and "Driving Customer Satisfaction" Blackboard article

1. How does the service provided by Enterprise differ from other car rental companies?
2. What actions did Enterprise take to improve its service quality?
3. What role do employees (and employee satisfaction) play in service quality?

"Staple Yourself to an Order"

1. How does the order management cycle (OMC) related to customer satisfaction?
2. What are the lessons to be learned from tracking the OMC?
3. Why do orders sometimes fall through the cracks or get mismanaged?
4. Which process analysis tools might be applied to improving the OMC?

SESSION 5

Midterm Exam

SESSION 6

MBNQA

2007 Malcolm Baldrige National Quality Award Criteria

Carefully read pages 1-8 that introduce the core values and criteria of the award. Also, carefully read pages 37-54 that provide detail on each of the criteria and the scoring system.

“The Baldrige at 14”

1. How have the Baldrige Award and criteria evolved since the Award's introduction in 1987?
2. What is the contribution of the Baldrige Award to the way companies manage quality?

“10 Reasons Why the Baldrige Model Works”

1. According to this article, why does the Baldrige Model "work"?
2. How do the reasons the Baldrige Model works fit with some of the principles put forward by the Quality Gurus (Deming, Juran and Crosby) we discussed during weekend 1?

Case: Wainwright Industries (A): Beyond the Baldrige

Questions for Wainwright case:

1. How did Wainwright Industries evolve in response to changes in its customers' industries?
2. How did Wainwright Industries' approach to quality evolve?
3. The case outlines Wainwright's "To Do" list based on the Baldrige examiners' recommendations. Based on the case description, how did Wainwright Industries' activities and programs align with the seven Baldrige criteria?
4. As Wainwright Industries' managers consider ISO 9000, how are the company's strengths (and weaknesses) likely to facilitate (or impede) registration?
5. What would you tell Mike Simms about how to support the individuals involved in implementing the new tools?

SESSION 7

ISO 9000/14000

“Enhancing Technology Students' Understanding of ISO 9000

1. What is ISO 9000?
2. What are the benefits of ISO 9000 registration?
3. What is involved in the preparation for ISO 9000 registration?
4. What are the four levels of ISO 9000?

“An Investigation into Issues Related to the Latest Version of ISO 9000”

1. According to the research, why do firms seek ISO 9000 registration?
2. Which of the ISO 9000:2000 processes are perceived as the most difficult in preparing for ISO 9000 registration?
3. What are the perceived benefits of ISO 9000 registration?
4. How do perceived benefits and perceived difficulties differ for firms that seek registration for internal versus external reasons?

“The Implementation and Impact of ISO 9000 among Small Manufacturing Enterprises”

1. What unique challenges do small enterprises face in seeking ISO 9000 registration?
2. What factors are identified as contributing to successful ISO 9000 implementation?
3. What do the findings of the research indicate about the factors that are most important to the success of ISO 9000 implementation?

“An Examination of the Economic Benefits of ISO 9000 and the Baldrige Award to Manufacturing Firms”

1. How are the economic benefits of ISO 9000 and the Baldrige Award measured in this article?
2. What does the article report about the economic benefits of ISO 9000?
3. What does the article report about the economic benefits of the Baldrige Award?

Case: Com Dev Xi'an ISO 9000
Registration

Questions for the Com Dev Xi'an case:

1. What does Com Dev International (CDI) consider to be its competitive strengths?
2. What challenges is CDI facing? How is the market changing?
3. How would customers' quality expectations be described in terms of Garvin's eight dimensions?
4. Why did CDI establish a division in China and how did it do so?
5. What are the arguments for and against ISO 9000 registration for Com Dev Xi'an?
6. Should Com Dev Xi'an seek ISO 9000 registration?

SESSION 8

Six Sigma

“Six Sigma Basics”

1. How does the Six Sigma approach fit in with the other quality systems we have discussed?
2. What are the main Six Sigma methodologies?
3. What is the organizational structure for Six Sigma?

“Six Sigma: A New Approach to Quality Management”

1. What is “new” about Six Sigma’s approach to quality management?
2. Is it really new?
3. What factors must be in place for Six Sigma to be successful?

“Six Sigma – Strategy for Organizational Excellence”

1. What makes Six Sigma different?
2. How does the DMAIC approach work in the example in the article?

“Who Needs Six Sigma, Anyway?”

1. What criticisms of Six Sigma are outlined in the article?
2. What alternatives to Six Sigma are offered in the article?
3. What do you think?

“Six Sigma: Fad or Fundamental?”

1. How does the article address the criticisms of Six Sigma?
2. What do you think?

Case: GE...We Bring Good Things to Life (A)

Questions for GE case:

1. Just how successful has this Company been under its current leadership?
2. How difficult a change did it face in 1981?
3. How does this Company defy logic, confound the experts, and continue to grow profitably and increase market value alongside such younger upstarts like Microsoft?
4. Do you agree with GE’s leadership that, as expressed in Exhibit 8 of the case, “Breaking up...is the wrong answer (for GE)”? Why?
5. How is value created at the center (headquarters) of GE? Why is this important?
6. What could go wrong?
7. What should GE’s response be to possible contingencies?
8. As a member of GE’s Corporate Executive Council, would you advocate the implementation of Six Sigma Quality at the Company? Why?

SESSION 9

Six Sigma

“Six Sigma Basics”

4. How does the Six Sigma approach fit in with the other quality systems we have discussed?
5. What are the main Six Sigma methodologies?
6. What is the organizational structure for Six Sigma?

“Six Sigma: A New Approach to Quality Management”

4. What is “new” about Six Sigma’s approach to quality management?
5. Is it really new?
6. What factors must be in place for Six Sigma to be successful?

“Six Sigma – Strategy for Organizational Excellence”

3. What makes Six Sigma different?
4. How does the DMAIC approach work in the example in the article?

“Who Needs Six Sigma, Anyway?”

4. What criticisms of Six Sigma are outlined in the article?
5. What alternatives to Six Sigma are offered in the article?
6. What do you think?

“Six Sigma: Fad or Fundamental?”

3. How does the article address the criticisms of Six Sigma?
4. What do you think?

Case: GE...We Bring Good Things to Life (A)

Questions for GE case:

9. Just how successful has this Company been under its current leadership?
10. How difficult a change did it face in 1981?
11. How does this Company defy logic, confound the experts, and continue to grow profitably and increase market value alongside such younger upstarts like Microsoft?
12. Do you agree with GE’s leadership that, as expressed in Exhibit 8 of the case, “Breaking up...is the wrong answer (for GE)”? Why?
13. How is value created at the center (headquarters) of GE? Why is this important?
14. What could go wrong?
15. What should GE’s response be to possible contingencies?
16. As a member of GE’s Corporate Executive Council, would you advocate the implementation of Six Sigma Quality at the Company? Why?

SESSION 10

Final Exam