



Quality Assurance in Supply Chains SM687

BASIC INFORMATION

Program	MBA/MS.SCM
Credit Hours	3

CAPSULE STATEMENT

During the second half of 20th century, quality management (QM) revolutionized the business processes and practices. In academia, it has been one of the major research areas in the operations management literature during this period. Over the years it has evolved to incorporate new practices (e.g. supply chain management (SCM)) and methodologies (e.g. Six Sigma). Quality gurus argued that quality improvement can increase the profitability by improving the marketability of the products through improved performance and lower costs resulting from reduction in defects and field failures. Empirical evidence indeed suggests that QM is positively related to improvement in; product quality, customer satisfaction, market share, and competitive advantage.

A supply chain is composed of all the entities taking part in fulfilling a customer's order. Supply Chain Management enables organizations to manage the value addition in goods and services throughout the SC as a single process with a common goal of customer satisfaction. This is contrary to the traditional practice of entering into arms-length relationships with the SC partners (customers/suppliers) where dealing with them is a zero sum game. Research and practice indicates that SCM is an effective tool for firms seeking increased competitiveness, business stability, and growth.

Recent years have seen increased amount of interest in the study of QM from SC perspective. This area has been formally termed as "supply chain quality management." Foster and Ogden (2008) suggested that SCM and QM efforts improve each others' performance and integration between the two functions can be beneficial for an organization in many ways. Houshmand and Rakotobe-Joel (2000) argued that SCM as a paradigm is geared toward adjusting the system at the SC level so as to achieve harmony in all the processes whereas quality improvement efforts target higher level of performance continuously at the organizational level. Organizations, however, are usually involved in these two activities simultaneously and hence require SC integration and quality improvement at the same time. It is also important to integrate SCM and

QM because both are interrelated, i.e. better quality cannot be achieved without SC integration and efforts to improve quality on continual basis usually result in higher level of integration between all the SC partners.

The objective of this course is to develop an understanding of QM practices with reference to SCs and how quality tools and management practices can be effective in SCs.

LEARNING OBJECTIVES

By the end of this course, you should be able to:

- Understand & apply principles of quality management (QM) with SC perspective
- Learn to apply problem solving & process improvement techniques of QM in SCs
- Develop a thinking process that allows participants to come up with “out of the box” solutions for the SC related quality problems
- Understand how to develop and implement SC quality strategy

COURSE ASSESSMENT

Quizzes	10%
Assignments	15%
Class Participation	15%
Presentations	10%
Project	20%
Final Exam (Comprehensive)	30%

TEXT

Articles assigned (Available on Moodle before every class)

ADDITIONAL REFERENCES

1. *The Management and Control of Quality*. 6th ed. By Evans, James R., and William M. Lindsay
2. *Introduction to Statistical Quality Control*. 6th ed. By Douglas C. Montgomery

3. *Juran's Quality Control Handbook*. 5th ed. By Juran, Joseph M., and Frank M. Gryna.
4. *Six Sigma and Beyond* by D H Stamatis.
5. *Total Quality Management* by John Oakland 6th ed.
6. *Quality Management: A Customer Driven Approach* by Raouf, A., Yusuf, I.

USEFUL LINKS

Pakistan Institute of Quality

<http://www.piqc.com.pk/>

National Productivity Organization

<http://www.npo.gov.pk/default.asp>

Malcolm Baldrige National Quality Award

<http://www.quality.nist.gov/>

European Society For Quality

<http://www.efqm.org/en/>

Journal of Quality and Technology Management

<http://www.pu.edu.pk/iqtm/journal/index.html>

The TQM Journal

<http://www.emeraldinsight.com/journals.htm?issn=1754-2731>

International Journal of Quality & Reliability Management

<http://www.emeraldinsight.com/journals.htm?issn=0265-671X>

Quality Assurance in Supply Chains (SM687)

CLASS POLICY

PARTICIPATION

Participation is one of the most important (and consequential) components of the class. Each participant is expected to participate fully in class discussions. Readings related to each session

will be assigned one week prior to the class. It is a prerequisite for the participants to come prepared after reading all the assigned material and participate in class discussions with relevant arguments.

TEAM WORK

Teamwork plays a very important role in implementation of quality management practices. It is also an important part of your learning experience and you are expected to learn how to do tough assignments in teams while meeting the deadlines and quality standards. Project and assignments in this course will be team based unless otherwise specified.

ORAL PRESENTATIONS

Each participant/team is likely to make 2-3 presentations during the course. Firstly, each participant will be asked to present a topic before the class at least once during the course. The topics of these presentations will be provided by the resource person. Maximum 20 minutes will be allowed for each presentation. These presentations should show not only the knowledge acquired in the current course but also your prior knowledge in areas of quality and supply chain. Secondly all the teams will be required to make presentations regarding the project at different times during the semester.

A hardcopy of the presentation (in handout format) is to be handed to me before the presentation. You are encouraged to show and discuss your presentations with me before the class. So that shortcomings on the day of presentation can be avoided.

ASSIGNMENTS & CASES

Group and individual assignments may be assigned related to each session. Assignments should be uploaded on Moodle before the deadline. You can contact me through email (before the deadline) if you have problems in submitting/uploading the assignments.

FINAL PROJECT

Teams are required to submit the final project by **12th session**. The final project will be done in form of 3 to 4 assignments for which there will be formal presentations as well. Final presentations for the projects will be held in the 15th session.

For the project you would be required to choose an organization whose managers are willing to provide you with information relating to its quality systems and SC practices. Further details related to the project have been uploaded on the course page. Please note that project is the most detailed activity to be performed during the course and I strongly encourage all the participants to extensively interact with me regarding the progress in the project. Presentations at various stages of the course may also provide a good source of feedback for the final report.

QUIZZES

In order to incentivize the weekly readings, unannounced quizzes will be conducted. There might be quizzes related to previous topics as well but they will be announced. From a total of (n) quizzes, best (n -1) quizzes may be considered for the final grade. No make-up quizzes will be

allowed. Quizzes and exam in the course will be open notes. However you need to bring the notes in the prescribed format only.

USE OF MOBILE PHONES AND OTHER ELECTRONIC DEVICES

1. Use of mobile phones and any other electronic device is prohibited during the class time.
2. All mobile phones should be turned-off and secured in pockets or bags during the class time, and may not be used for ANY purpose, including calculations, time-keeping, etc

SM687: Course Contents

Week	Topics
1	Quality & Supply Chain Management: Historical Perspective
2	Quality Management Practices
3	Quality assurance in supply chains
4	Quality Management Tools and Techniques
5	Application of Quality Tools in Supply Chains
6	SCQM Strategies: Lean Management
7	Lean Tools: Value Stream Mapping
8	SCQM Strategies: Agility
9	SCQM (Hybrid) Strategies: Leagile Supply Chains
10	SC integration
11	Supplier Quality Management
12	Managing SC Processes: The role of quality standards
13	Role of IT in SCQM
14	Sustainable Supply Chains
15	FINAL PROJECT PRESENTATIONS