

**Supply Chain Management Education and Training at FedEx
Two Years and 200 Hours Later**

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Abstract. In 1997 FedEx Strategic Sourcing & Supply (SS&S) recognized that education and training in supply chain management (SCM) was a critical requirement for its successful evolution from transactional purchasing to strategic SCM. In this manuscript and its associated conference presentation, an overview of the customized SCM education and training program utilized at FedEx SS&S is presented. This program which provided approximately 200 hours of education and training per class was delivered to over 350 FedEx strategic sourcing and supply personnel during the period from 1998 - 2000. An extension of this program was offered to key FedEx suppliers in 2001.

Background Information. FedEx SS&S is responsible for meeting the procurement and supply chain management needs for Federal Express Corporation. SS&S is organized in SCM groups that are aligned to meet the needs of their internal FedEx customers. SS&S SCM groups include; Air Operations, Information and Telecommunications, Facilities/Business Services, and Vehicles/GSE/AG&F.

In 1996-1997 while participating as a member of the Global Procurement and Supply Chain Benchmarking Initiative (GEBN) at Michigan State University, SS&S benchmarked its performance against world class companies. As a result of these benchmarking activities, the SS&S top management team recognized that one of the keys to its success was the development of its people. Top management also recognized that a significant commitment to education and training would be required. Early in 1998, FedEx SS&S contracted with E.L. Nichols & Associates, LLC (ELNA) to design, develop, and deliver a customized SCM educational program to meet its education and training needs. This program, which came to be known as "SCM 202," is described in the following sections.

SCM 202 Development. The objectives for SCM 202 were to:

- ☐ Increase participants' understanding of SCM-related concepts
- ☐ Increase participants' understanding of FedEx SS&S SCM-related initiatives
- ☐ Assist in the development of critical skills necessary for participants to make a full contribution to FedEx SS&S SCM initiatives
- ☐ Help reinforce the linkage between FedEx SS&S SCM initiatives and the role of individual FedEx SS&S associates.

Representatives from ELNA worked closely with the SS&S management team and its Resource Development staff to insure that the program met these objectives. A series of "face to face" meetings were conducted to clearly identify topics to be addressed in SCM 202 and to determine the amount of time to be devoted to each topic. ELNA then developed detailed outlines for each module that were reviewed and approved by SS&S. These outlines were further refined into detailed daily schedules which presented topics to be covered within the module on an hourly basis. Following the review and approval of the daily schedules, the actual presentation materials were developed. These materials were then reviewed and approved by SS&S. Participant workbooks were then developed. This approach worked well for all parties and insured that the SCM 202 students received an educational program that truly met SS&S's requirements.

SCM 202 Content. The initial classes of SCM 202 consisted of ten two-day "modules" that were held once a month for ten months. The program modules and major topics addressed within each module are as follows:

1. Supply Chain Management Overview / Process Improvement and Cycle Time Reduction

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|---|--|
| <input type="checkbox"/> Key SCM concepts | <input type="checkbox"/> Supply chain processes |
| <input type="checkbox"/> SCM evolution | <input type="checkbox"/> Process modeling |
| <input type="checkbox"/> SCM drivers | <input type="checkbox"/> Causes of long process cycle times |
| <input type="checkbox"/> Supply chain strategy | <input type="checkbox"/> Techniques for reducing process cycle times |
| <input type="checkbox"/> Process improvement basics | |

2. Effective Cross-functional Teams

- | | |
|---|--|
| <input type="checkbox"/> Worker motivation | <input type="checkbox"/> Team membership |
| <input type="checkbox"/> Effective communication and listening skills | <input type="checkbox"/> Team leadership |
| <input type="checkbox"/> Cooperative team learning | <input type="checkbox"/> Performance evaluation and rewards |
| <input type="checkbox"/> Cross-functional team benefits and limitations | <input type="checkbox"/> External participation and involvement |
| <input type="checkbox"/> Organizational resource requirements | <input type="checkbox"/> Cross-functional sourcing team implementation process |

3. Supply Chain Strategy and Performance Measurement

- | | |
|---|--|
| <input type="checkbox"/> Strategy basics | <input type="checkbox"/> Importance of the linkage between supply chain strategies and performance measurement |
| <input type="checkbox"/> Importance of supply chain strategy integration | <input type="checkbox"/> Identification of supply chain objectives and performance requirements |
| <input type="checkbox"/> Establishing and implementing the supply chain strategy development process | <input type="checkbox"/> Development of supply chain performance metrics |
| <input type="checkbox"/> Introduction to the "balanced scorecard" approach to performance measurement | |

4. Supply Chain Sourcing Strategy Development Processes

- ☐ Importance of proper positioning of work within the supply chain
- ☐ Strategic considerations regarding insourcing versus outsourcing
- ☐ Establishing and implementing the supply chain sourcing strategy process
- ☐ Importance of formal commodity/purchase family strategy development process
- ☐ Establishing and implementing the supply chain sourcing strategy process

5. Interorganizational Relationships and Strategies

- ☐ Types of interorganizational relationships
- ☐ Establishing appropriate fit between interorganizational relationship and business requirements
- ☐ Strategic alliances
- ☐ Selecting supply chain partners
- ☐ Establishing the relationship
- ☐ Managing the relationship
- ☐ Performance measurement

6. Establishing a World Class Supply Base and Supplier Development

- ☐ Importance of supply base performance
- ☐ Supply base development: an ongoing process
- ☐ Review of supply chain, sourcing, and commodity/purchase family strategies to determine supply base capability requirements
- ☐ Supplier assessment and selection
- ☐ Performance measurement and linkage to sourcing and commodity/purchase family strategies
- ☐ Identification of critical suppliers for development

7. Supplier and Customer Integration into Key Supply Chain Processes

- ☐ Importance of supplier and customer integration into supply chain processes
- ☐ Use of cross-functional and interorganizational teams
- ☐ Identification of key supply chain processes
- ☐ Assessment supply chain member business priorities and core competencies
- ☐ Identification of opportunities for greater supplier and customer integration
- ☐ Best practices

8. Strategic Cost Management

- ☐ Cost basics
- ☐ Cost identification
- ☐ Cost drivers
- ☐ Cost reduction strategies
- ☐ Performance measurement
- ☐ Cooperative efforts with supply chain members
- ☐ Supply chain value analysis
- ☐ Total cost/value models for supplier selection

9. Supply Chain Inventory Management and Logistics

- ☐ Reasons for holding inventory
- ☐ Cost/service trade-offs
- ☐ Inventory positioning in the supply chain
- ☐ Opportunities to reduce supply chain inventories
- ☐ Supply chain design/structure
- ☐ Internal and external coordination
- ☐ Transportation issues
- ☐ International issues
- ☐ Opportunities for logistics process improvement within the supply chain
- ☐ Information systems support/modeling

10. Information Systems and Technology

- | | |
|---|---|
| <input type="checkbox"/> Importance of information in SCM | <input type="checkbox"/> Data warehouses |
| <input type="checkbox"/> Information requirements determination for effective SCM | <input type="checkbox"/> Telecommunications |
| <input type="checkbox"/> Enterprise-wide systems | <input type="checkbox"/> Electronic commerce |
| <input type="checkbox"/> Interorganizational information systems | <input type="checkbox"/> Decision support systems |
| | <input type="checkbox"/> Legacy systems issues |

SCM 202 Delivery. A total of ten classes were held between 1998 and 2000. Approximately 35 SS&S exempt and management personnel attended each class. The program consisted of pre-class readings, lectures, discussions, guest speakers, in-class exercises, case studies, and homework assignments. Given the wide range of educational backgrounds and work experiences represented by the SCM 202 students, it was recognized that it was going to be a challenge to keep all of the participants fully engaged in the program all of the time. In an effort to meet this challenge, every class session required active involvement by the students. Ample time was provided for questions and discussion. In-class exercises were also used extensively. "Homework" assignments were given in advance of each module. The assignments included a number of different activities, however, one of the most successful approaches involved asking student teams from the different SS&S SCM groups to come to class prepared to make a presentation that addressed "success stories" and "worst experiences" in specific subject areas (e.g., strategic alliances). This facilitated the sharing of "best practices" across SCM groups as well as identifying "traps" that a group had encountered that, hopefully, could be avoided by other groups in the future.

Each module was facilitated by two or more faculty members from ELNA as well as representatives from the SS&S Resource Development staff. ELNA utilized university faculty from institutions with leading SCM academic programs and research centers including, Lehigh University, Michigan State University, North Carolina State University, and the University of Memphis. ELNA also used industry experts as faculty members. A special emphasis was placed on involving university faculty whose teaching, research and consulting activities focused on "real world" supply chain management issues and practices.

SCM 202 Student Examinations. FedEx SS&S top management wanted to insure that participants were meeting their SCM 202 objectives in terms of increased understanding of key SCM concepts, principles, and best practices. Toward this end, each of the SCM 202 classes included an examination component. This was an area where there was continual refinement throughout the ten classes. Initially, the participants were required to take an objective-type pre-test and post-test for each module. This practice was discontinued when it was found that a number of the participants were more concerned about the correct answer for a specific test question, than in developing an understanding of the subject matter. The objective-type exams were then replaced by comprehensive mid-term and final exams that consisted of integrative essay questions and short cases. This approach, while generally viewed as an improvement, still caused considerable problems for a number of the SCM 202 students as they felt that they were not able to adequately demonstrate their understanding of the subject matter using this format. The examination approach that was used for the last round of classes was found to be the most satisfactory. Comprehensive mid-term and final exam were

given to these classes, however, these exams were based on detailed business cases that had been developed for SS&S. Participants were provided with the cases two weeks prior to the exam in order to allow adequate time for thorough analysis of the case material. The students then were given exams that addressed key issues from the cases. This approach was very well received and provided a beneficial by-product in that cross-functional “study” teams were utilized by the participants to analyze the cases in preparation for the exams. This provided students with valuable cross-function team experience, an approach that was and is strongly encouraged for doing work in the “real world” of SS&S.

SCM 202 Critical Success Factors. The SCM 202 program is FedEx SS&S’s most significant education and training program offered to date. It is also regarded as a major success that has greatly benefited its strategic SCM efforts. Several critical success factors enabled this favorable outcome. These factors included, but were not limited to:

- ❑ Detailed review activities for the development of the overall program, modules, and presentation materials
- ❑ Session by session participant evaluations for each module and post-mortem conference calls with SS&S Resource Development personnel following the completion of each module and each class. This ongoing critical evaluation process led to continual refinement and improvement of all aspects of the SCM 202 program
- ❑ Utilizing the “right” faculty members. People that have strong SCM academic training as well as significant industry and consulting experience. People that have a successful “track record” in corporate education and training
- ❑ Ongoing communication and a general spirit of team work between FedEx SS&S and the ELNA group
- ❑ A commitment to customer responsiveness and continuous improvement by ELNA and the FedEx SS&S Resource Development staff.

Integrated SCM For Suppliers. Given the success associated with SCM 202, a scaled down version of the program was offered for key FedEx suppliers. During 2001, five two-day supplier SCM programs were offered. These programs consisted of several critical SCM topics and focused on SCM integration. A major feature of the SCM for Suppliers program was a half-day workshop that teamed suppliers with their FedEx counterparts to identify integration opportunities. This program was viewed as being highly successful by both suppliers and FedEx. Additional offerings of the supplier program are currently being planned for 2003 and beyond.