

***Supply Chain Logistics Management 5th edition
Bowersox Solutions Manual***

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Case 1

Integrated Logistics for SES/BAG

Overview

This case finds Maxwell Stevens sales representative for Specialty Engineering Services (SES), in a situation common to today's competitive sales environment. His company, as a supplier to a major manufacturer Boston Aerospace Group (BAG), is faced with changing times. BAG is in the midst of a "changing of the guard" as Mr. Steven's long-time contact, Nathan Benson, retires. Benson's successor, Tyler Pinto, brings a new set of supplier expectations to the fore of BAG's purchasing strategy. Over the years, the quality of competitors' products began to match SES. Firms now compete based on logistics quality. To keep the BAG business, SES must improve its logistical performance to meet the customer's rising expectations.

The textbook illustrates a concept called the "shrinking service window." The idea behind the shrinking service window is that customers have begun to expect higher levels of service (higher fill rates) in less time (shorter order cycles). In BAG's case, a change in leadership is responsible for the new, higher expectations. The change, however, is indicative of the realization that logistics has become a strategic weapon. The case illustrates that SES must either match competitors' service or face losing a major customer.

Solutions to Questions

1. A diagram of the SES-BAG supply chain is provided on the next page.

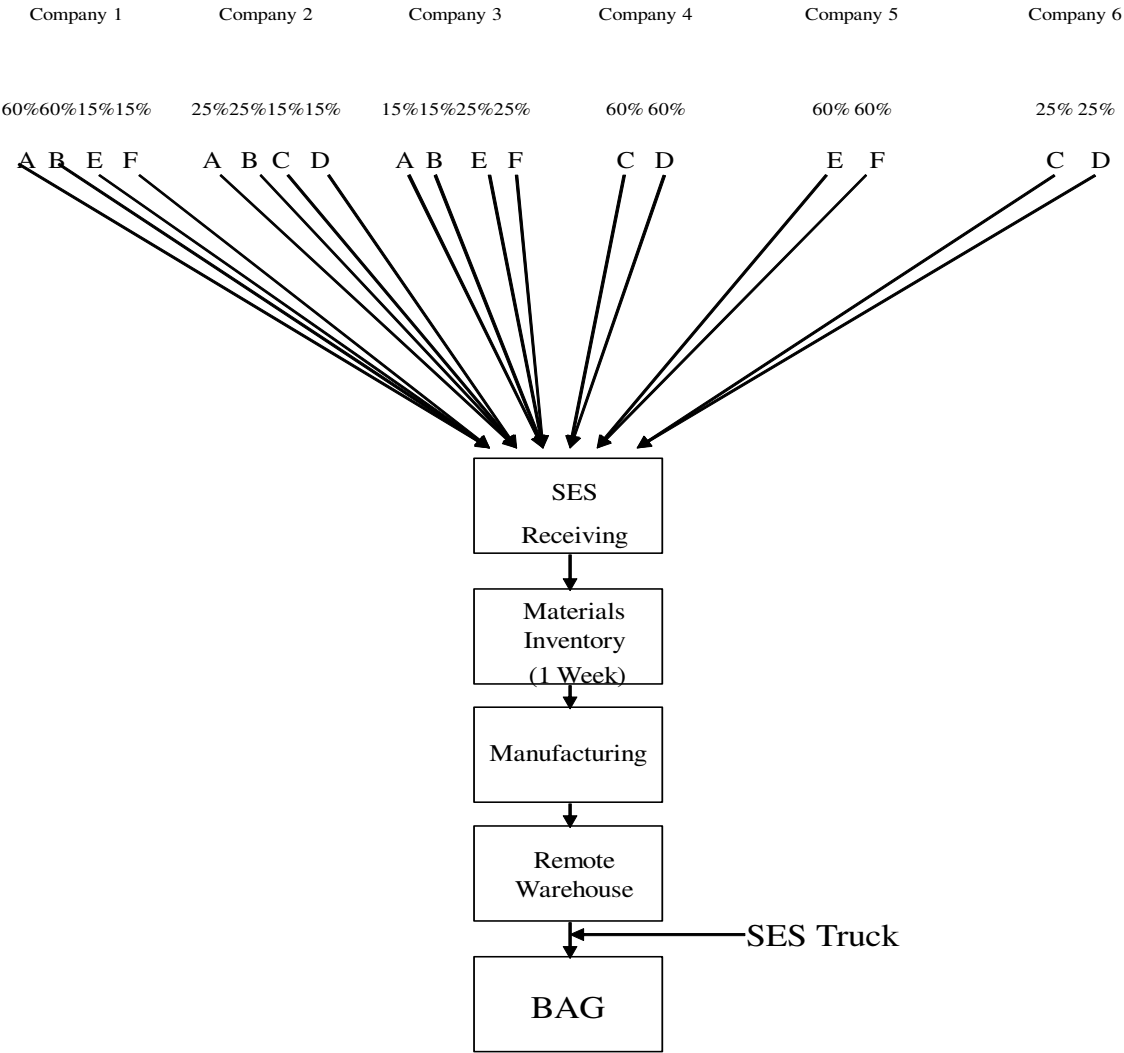
Stages that are adding value:

- Inbound transportation from the suppliers
- SES packaging
- manufacturing
- product delivery

Stages that are not adding value:

- "dwell time" at the remote warehouse
- matching orders to paperwork
- materials receiving
- materials inventory

SES-BAG supply chain



2. Minimum order cycle time: 8 days

Maximum order cycle time: 25 days

3. Yes, it appears that the performance cycle can be improved through the use of 25% and 15% suppliers. For example, Company 2 offers better service levels and less variability than Company 1. Using more reliable suppliers may result in higher prices on materials but this can be mitigated by reducing SES's material inventories. Greater certainty on the part of suppliers reduces the need to maintain high stocks of inventory.

4. This is a question of opinion. People's resistance to change should be considered. In particular, manufacturing personnel will be tough to convince due to past experience.

5. The means of "selling" the idea to Mr. Pinto is matter of opinion -- more of an art than science. Regardless of the specific effort, it should demonstrate why Pinto should keep BES as a core BAG supplier. This will involve conveying clear guidelines for making the desired service improvements while maintaining a competitive price -- providing Pinto with the value he demands.

Below are samples of "Qualifying" and "Order winning" criteria.

"Qualifying criteria"

- 1) Good product quality
- 2) Competitive price
- 3) Service capability that exceeds the minimum standards

"Order winning criteria"

- 1) Consider changes that demonstrate that SES is practicing the very service expectations that Pinto is trying to implement. This would illustrate SES's conceptual understanding of Pinto's ideas.
- 2) Position BAG for electronic data interchange (EDI) or other asset- and information-sharing processes. EDI would allow Pinto with "real time" information from SES. These investments also help to solidify relationships.

These criteria will likely change over time. The shrinking service window illustrates how customers continue to expect more until eventually service approaches 100% fill rates and very short performance cycles.

This case suggests that supply chain management increases in sophistication with higher levels of performance. Unless these areas of improvement are addressed, supplying firms will be left behind as competitors strive to meet customers' ever-changing needs.

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Case 2

Woodmere Products: Time Based Logistics at Work

Overview

From Woodmere's perspective, the HomeHelp partnership offers substantial rewards, but at a price. This case demonstrates the all-encompassing change that is sometimes required for a firm to maintain long-term competitive success. Change is very difficult to achieve in organizations large and small. Laborers, managers and executives alike establish "comfort zones" that are difficult to break. The case follows John Smith as he first studies the potential benefits of refocusing production and logistics strategies before promoting the idea to top management.

Solutions to Questions

1. As the supplier, Woodmere is faced with the ultimatum of effecting the change (implementing the time based service strategy) or losing the HomeHelp business. To implement the time based strategy will require new approaches to production and logistical operations as well as significant, constant investments in technology. The changes are likely to affect the way Woodmere conducts business with other customers and channel participants (suppliers, transportation providers, etc.).

As the customer, HomeHelp has issued the ultimatum to Woodmere Products. However, should Woodmere elect to turn down the opportunity, HomeHelp will have to look elsewhere for products and service.

Though the issue is open to debate, it seems that both firms stand to benefit from the time based strategy. Both firms stand to gain potential competitive advantages by being the first in their respective industries to adopt time-based logistics practices. Ideally, alliances should create synergy, where the dynamics of the whole is greater than the sum of the parts -- both firms succeed at levels unachievable when alone. As noted above, significant investment is required of each firm to see the strategy reach fruition.

2.

WoodmereProducts

Benefits

- An exclusive relationship with HomeHelp that ensures generous revenues well into the future.
- The time based strategy may create competitive advantage that carries over into other business.
- Replacing inventory with information improves customer service and can lower costs.

Barriers

- The generous revenues derived from the HomeHelp relationship will require significant change and investment. The very nature of the potential competitive advantage offered by the time based strategy is that it is unique -- no one in the industry is doing it. Therefore, the challenge of figuring out how to implement the strategy effectively rests with the first mover, requiring trial-and-error efforts and investment. Change is almost always difficult to implement.
- The failure experienced with Happy Home & Living plagues future close relationships.
- Management's belief that the "additional cost" of providing service to HomeHelp will be pushed on to other customers.

HomeHelp

Benefits

- Reduced inventories in regional warehouses.
- Improved service from Woodmere that translates into better service delivered to HomeHelp customers in terms of availability, and quality.

Barriers

- The time based strategy will require commitment and investment. The time and resources required to implement such momentous change between two channel partners is substantial.
- Investment in technologies is required upfront and throughout the relationship.

3. Suggestions may include but are not limited to:

- Reduce the role of the distribution centers. Direct shipment from the manufacturing facility would be most effective, reducing the time spent in transit and eliminating the sorting process at the distribution center. This would also reduce Woodmere's inventory holding investment significantly.
- Deliver incomplete orders when necessary rather than holding up the order at the distribution center until complete.
- Include HomeHelp's in-stock figures in data that is transmitted daily. In addition, more frequent data transmission may be worthwhile.
- The purpose of the central information service may be in question though little is said about it. It would be worthwhile to determine the role to transportation as well.
- To achieve competitive advantage is difficult. Once it is achieved, however, it should be fully exploited to benefit the firm. Perhaps Woodmere should develop the time based strategy to serve all customers.

4. There is no clear-cut determination of right and wrong in this question. Students should assume a position on one side of the issue and justify their decisions with well-supported arguments. Discussion should encompass advantages/disadvantages of the proposal with any suggestions for change.

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CLASSROOM INTRODUCTION

The Game World

In a simulation-based environment, players have the opportunity to explore a wide range of variables, identify potential options and relationships, and control the various components of the system. The player navigates their way through an array of “real-life” decision points allowing them to exercise strategic thinking skills, analyze data, evaluate options, reflect on this input and practice decision-making, thereby acquiring conceptual knowledge while they play. Players experience immediate feedback on the result of their decisions and how they impact the goals of the exercise. This learning by doing in a risk-free environment results in improved knowledge retention and increases the desire to learn even more.

A well-designed business simulation strives to provide authentic concepts and activities, clear feedback, and challenging goals as well as a method for assessment of performance in a graphic-based, active technology-based environment. This experience feels like play, while providing a rich learning experience.

Digital natives, otherwise known as the Net Generation, have grown up with games. Educators are challenged to incorporate new strategies into the learning experience. Digital natives typically see work as play and play as work, while also viewing technology as a natural part of life, and favoring graphics and animation over text – a combination that results in the ideal consumer of instructional simulations.

Thoughtfully crafted learning objectives serve as the starting point for the design approach of the simulation and provide the scaffolding for the game, facilitating important learning as each player changes roles during the game while working through the key activities.

Digital simulations also provide an opportunity for virtual performance assessment. Collection of game-based performance is integrated within the platform. The online collection of learner performance data, conducted in the background, has the added benefits of reducing both instructor workload as well as “test anxiety” for the student.

Practice Operations 1.0 is a simulation game designed to present players with a series of production-based scenarios, based upon specific set of learning objectives, allowing the player to practice mastery over the knowledge, skills and abilities necessary to function as an Operations Manager. The game provides an interactive, animated view of the elements of operations: production processes, supply chain management, forecasting and contracts and human resources and capacity planning in a five-module format. Practice Operations Management is designed with emphasis on the following key points:

- Diverse products and markets require students to emphasize different values within the operations process (value, cost, flexibility), which requires them to use decision-making skills while adapting to dynamic elements within inventory management, capacity, production, sourcing, etc. Therefore, in the simulation, players are challenged to create different product designs to meet market conditions.

- The focus of the game is on product-based scenarios, which allows for the incorporation of production process design, capacity, supply chain, Just-In-Time inventory control, labor management, order fulfillment, customer satisfaction, and quality control.
- The game supports leader-board score competition among students within the individual focused scenarios.

Targets and Goals

Industry Connection: Knowledge, Skills and Abilities

The role of the Operations Manager is complex, multifunctional, and requires a wide range of both global and disciplinary-based skills, including the ability to coordinate, plan and direct activities and human resources to create products and meet departmental goals. The U.S. Bureau of Labor Statistics publishes the *Occupational Outlook Handbook*, which provides detailed descriptions of occupational groups and job categories. A companion resource, O-NET Online, provides information-rich reports for these same occupational groups, including current data from the national and state level on wages and employment, educational level, and detailed position descriptions.

O-NET Online summarizes the responsibilities of the Operations Manager as:

“Plan, direct, or coordinate the operations of public or private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services.”

A sample of the tasks required of the Operations Manager include:

1. Oversee activities directly related to making products or providing services.
2. Direct and coordinate activities of businesses or departments concerned with the production, pricing, sales, or distribution of products.
3. Review financial statements, sales and activity reports, and other performance data to measure productivity and goal achievement and to determine areas needing cost reduction and program improvement.
4. Manage staff, preparing work schedules and assigning specific duties.
5. Direct and coordinate the organization's financial and budget activities to fund operations, maximize investments, and increase efficiency.
6. Establish and implement departmental policies, goals, objectives, and procedures, conferring with board members, organization officials, and staff members as necessary.
7. Determine staffing requirements, and interview, hire and train new employees, or oversee those personnel processes.
8. Determine goods and services to be sold, and set prices and credit terms, based on forecasts of customer demand.
9. Locate, select, and procure merchandise for resale, representing management in purchase negotiations.

10. Determine goods and services to be sold, and set prices and credit terms, based on forecasts of customer demand.
11. Develop or implement product-marketing strategies, including advertising campaigns or sales promotions.
12. Direct non-merchandising departments of businesses, such as advertising or purchasing.
13. Manage the movement of goods into and out of production facilities.
14. Recommend locations for new facilities or oversee the remodeling or renovating of current facilities.

Knowledge, Skills, and Abilities

In order to perform these tasks, O-NET has determined the key knowledge, skills, and abilities (KSAs) for the job classification of General and Operations Managers.

O-NET Online Knowledge, Skills, and Abilities for General & Operations Managers	
KNOWLEDGE	
Administration & Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
Personnel & Human Resources	Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.
Customer & Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
Economics & Accounting	Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
SKILLS	
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
Reading Comprehension	Understanding written sentences and paragraphs in work related documents.
Speaking	Talking to others to convey information effectively.
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Monitoring	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
ABILITIES	
Oral	The ability to listen to and understand information and ideas presented through spoken words and sentences.

Comprehension	
Oral Expression	The ability to communicate information and ideas in speaking so others will understand.
Problem Sensitivity	The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

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Written Comprehension	The ability to read and understand information and ideas presented in writing.
Written Expression	The ability to communicate information and ideas in writing so others will understand.

Player Actions and KSAs

The following table provides a full list of actions that players can perform while playing the game. These actions and the processes utilized in taking these actions correlate directly to the necessary Knowledge, Skills, and Abilities required for success in the role of Operations Manager. This list should not be considered all-inclusive, but representative of both global and disciplinary-based skills.

Player Action	Details	Knowledge, Skill, Abilities
BIDDING AND FORECASTING		
Review financial data	Contract Payments, Materials Costs, Operating Costs, Expansion Costs, Returns Costs, Labor Costs, Shipping Costs	K – Economics & Accounting S – Critical Thinking A – Problem Sensitivity
Analyze operations reports	Completed Orders, Production Time, Inventory Turn, Production Station Efficiency, Production Quality, Ongoing Expansion, Ongoing Upgrades, Client Satisfaction	K – Administration & Management K – Mathematics S – Critical Thinking A – Written Comprehension
Research market forecasts	Current Trends, Upcoming Trends	S – Reading Comprehension
Examine current work requests	NA	K – Administration & Management K – Customer Service A – Written Comprehension
Bid on work requests	NA	K – Economics & Accounting K – Administration & Management
Examine competitors	Orders Completed, Customer Satisfaction, Previous Actions	K – Customer and Personal Service S – Critical Thinking
SUPPLIERS		
Research suppliers	Material Availability, Price, Quality, Reliability, Delivery Time, Delivery Schedules, Sustainability, Discounts, Cost of Ownership	K – Economics & Accounting K – Mathematics S – Reading Comprehension
Set up supply contracts	Material	K – Administration & Management
Manage existing supply contracts	Extend, Cancel, Renegotiate	S – Active Listening A – Oral Comprehension A – Oral Expression

Decide degree of integration with suppliers	Minimum Orders, IT Integration, Exclusive Contracts.	K – Administration & Management S – Monitoring/Assessing A – Problem Sensitivity
PRODUCTION PLANNING		
Manage production facilities	Build, Expand, Sell	K – Administration & Management K – Economics & Accounting
Research production stations	Purchase Cost, Operating Cost, Production Speed, Setup Time, Configuration Time, Labor Requirements, Complexity Capability, Upgradability,	K – Economics & Accounting K – Personnel & Human Resources S – Critical Thinking S – Monitoring/Assessing

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	Production Quality, Defect Rate, Breakdown Rate, Sustainability	A – Written Comprehension
Manage production stations	Buy, Upgrade, Sell, Staff	K – Administration & Management K – Economics & Accounting K – Personnel & Human Resources
Manage inventories	Build, Expand, Sell	K – Economics & Accounting S – Critical Thinking
PRODUCTION PROCESSES		
Examine contracts	Product, Quantity, Delivery Date	NA
Examine inventories	Materials, Intermediate Goods, Finished Products, Financial Impact	K - Mathematics S – Monitoring/Assessing A – Written Comprehension
Select products to produce	NA	K – Administration & Management K – Economics & Accounting
Allocate inventories	Dedicate space from total inventory to specific intermediate or finished products	S – Critical Thinking S – Monitoring/Assessing
Set production processes	NA	K – Administration & Management
Configure production stations	Operating Speed	K – Administration & Management K - Mathematics
CUSTOMER MANAGEMENT		
Examine contracts	Product, Quantity, Delivery Date	A – Written Comprehension
Modify contracts	Renegotiate, Cancel	A – Oral Expression A – Written Expression
Manage clients	Offer discounts and delivery dates	K – Customer & Personal Service S - Speaking
Examine customer performance	Returns, Late Orders, Cancelled Contracts, Sustainability	S – Critical Thinking S – Monitoring/Assessing
LABOR MANAGEMENT		
Hire workers for different tasks	Skill level, Cost, Abilities	K – Personnel & Human Resources
Compete for Shared labor pool	Like contracts, labor pool is shared among other companies, Other companies can hire your workers away	K – Personnel & Human Resources S – Active Listening A - Oral Expression
Train Workers to make them More Effective	Trade money and temporary loss of productivity, in exchange for increased skill level.	K – Personnel & Human Resources K – Administration & Management S – Active Listening A - Oral Expression

Practice Operations and Real World Applications

The Operations Management Process

In Practice Operations, players take the role of an owner of a small manufacturing company, producing a variety of products for different clients. In this game, players compete to win contracts to produce products, while tuning their businesses through the principles of operations management. These principles include choosing suppliers based on raw material quality, price, availability, delivery time, and reliability managing production processes to increase/decrease production capacity, increase production throughput and efficiency, increase new potential products, reduce inventory overhead, and manage product quality and price; managing and optimizing labor force; forecasting to stay abreast of developing trends in new work requests; and client management to keep current and potential clients happy.

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The Production Process

The game features a production process system, where players set up production processes for the various products they are attempting to produce. Each product requires a set of materials and a series of production tasks to complete. These production tasks are fulfilled by production stations within the player's production facility.

Each turn, players must manage a process for each product by assigning resources and production stations from their production facilities. These processes may be independent, or they may intersect if the player decides to split time for certain stations among multiple products. By varying the configuration of their production processes, players will be able to vary production speed, operating costs, equipment reliability, labor requirements, efficiency of material usage, and amount of intermediate goods produced.

Competitive Bidding

The game features a bidding system, allowing potential clients to offer work orders for all players to bid on. These requests will vary in terms of desired product, price, delivery time, and lot size. Players will be able to bid on these work requests by submitting quotes for price, delivery time, and quantity. At the end of a turn, the game will determine the winning bids, and award players contracts accordingly.

Desired lot sizes for some requests may far exceed the total potential production capacity of all players, or even be unlimited, so all players may participate in some work requests. The bidding system allows players in the simulation the ability to compete head-to-head, while allowing different operations management strategies to succeed in the same marketplace. It also allows different scenarios to be easily crafted by changing the parameters of the work requests, and forecasting to play a valuable role in the simulation (by predicting future types of work requests).

Labor Management

The game will also have a labor component, as players will need to hire and manage laborers as well production capital. Players will need to manage their resources in order to staff positions in the various sectors of their business, and take into account the cost and efficient use of labor, and how it contributes to the company's overall strategy.

Service-Oriented Elements

This simulation is focused on a product-fulfillment / "job shop" style operations company. While not a primary focus of the game, the service component will surface chiefly in the form of introducing customer-relationship issues as part of dealing with Clients.



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Instructor Manual

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Introduction



Game Description

Operations are the engine that drives a business. Practice Operations puts players in the role of an operations decision maker for a clothing manufacturing company. Play begins with an overview of the heart of that engine – managing the production process. Players review the contract specifications as well as the production process by walking through the production floor and shipping area. Players then analyze the receiving department functions of managing the supply chain and material inventories to ensure client needs can be met. In order to grow the business, players choose which new contracts to pursue and then optimize their receiving, production and shipping departments accordingly. As the business grows, players manage both the human and facility resources in order to meet capacity challenges. Customer satisfaction is a key metric for success. In the final stages of the game, the company puts players in complete control over all areas of operations at the new branch, with the challenge to build the most profitable company possible.

Potential Learning Outcomes

- Provides a lively, interactive experience that focuses on student learning through trial and error within holistic game play, where students see how the elements of operations and production come together.
- Supports online, out-of-class play and competition among students.
- Features game-world data and situations that reflect real-world operational situations.
- Highlights the inherently interdisciplinary nature of business by demonstrating that the various functional areas of the company – Human Resources, Manufacturing, Accounting, and Sales – must work together in order to meet company goals.
- Provides an opportunity for actual hands-on practice as an operations manager in a manufacturing scenario.
- Provides an opportunity to analyze and evaluate quality considerations in the production process.
- Stresses both customer satisfaction and financial results as the key success metrics.
- Provides reporting features that make it easy for instructors to assess player performance and decision-making.

Description of Modules

Module 1: The Production Process

Operations is the engine that drives a business. This module focuses on the heart of that engine, managing the production process. Module 1 should take **25-45 minutes to complete**.

Module 2: Managing Suppliers

This module unlocks the receiving department, putting players in charge of managing the supply chain and material inventories to meet client needs. Module 2 should take **25-45 minutes to complete**.

Module 3: Forecasting and Contracts

In this module, players choose which contracts to pursue, and optimize their receiving, production, and shipping departments accordingly. Module 3 should take **25-45 minutes to complete**.

Module 4: Human Resources and Capacity Planning

In this challenging scenario, players will manage both human and facility resources to meet capacity challenges. Module 4 should take **25-45 minutes to complete**.

Module 5: The New Branch

In this module, players will have complete control over all areas of their operations, and will be challenged to reach a net worth of \$50,000 as quickly as possible. Module 5 should take **1 to 2 hours to complete**.

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Module 6: Maximize Net Worth

In this **capstone module**, players again have complete control over all areas of their operations. The goal is to maximize the net worth of the firm over 50 turns. Module 6 should take **1 to 3 hours to complete**.

System Requirements

Computers used to run Practice Operations must meet the Technical Requirements listed below.

Windows OS:

1. Operating systems: Windows XP with Service Pack 3 / Windows Vista SP2 / Windows 7 / Windows 8.
2. Internet Browser: Firefox version 31 or above OR Internet Explorer 11 or above OR Google Chrome version 31 or above
3. Memory: 512MB RAM
4. Processor: Intel Pentium 3-4 processor or equivalent/better
5. Video: NVIDIA GeForce 6600 or better OR ATI Radeon 8500, 9250 or better OR Intel 945 chipset or better, 1024 x 768 resolution minimum
6. Internet: 128kbit/s Cable/DSL/LAN connection per computer
7. Hard Disk Space: 500MB free
8. Direct X: DirectX 9.0c

Mac OSX:

1. Operating system: Must have OS X 10.6 (Snow Leopard) or later.
2. Processor: Intel Core 2 Duo (PowerPC not supported)
3. RAM: 1GB System Memory
4. Video Memory: 256MB graphics card or decent integrated graphics chip. Must support OpenGL 1.5+
5. Internet Browser: Firefox version 31 or above OR Safari 7.1 or above OR Google Chrome version 31 or above

Apple iPad:

1. Model: iPad2 or later.
2. Operating System: iOS 8 or later.
3. Screen Resolution: 1024x768 or greater.

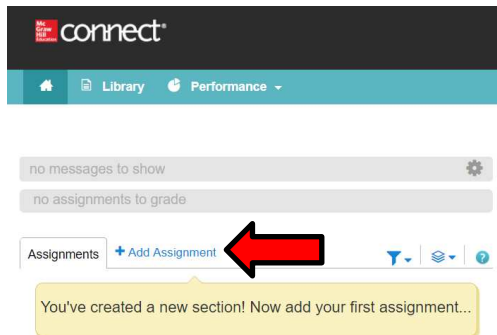
Android Tablet:

1. Operating System: Android 4 or later.

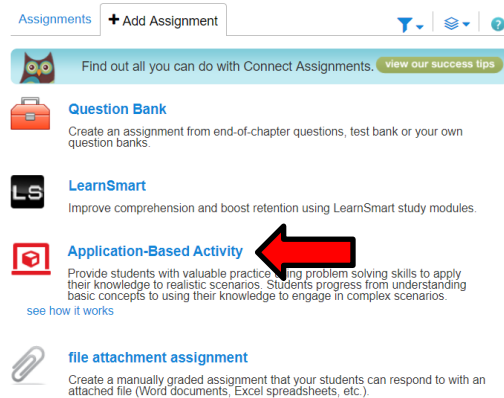
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How to Access, View, and Play Practice Operations

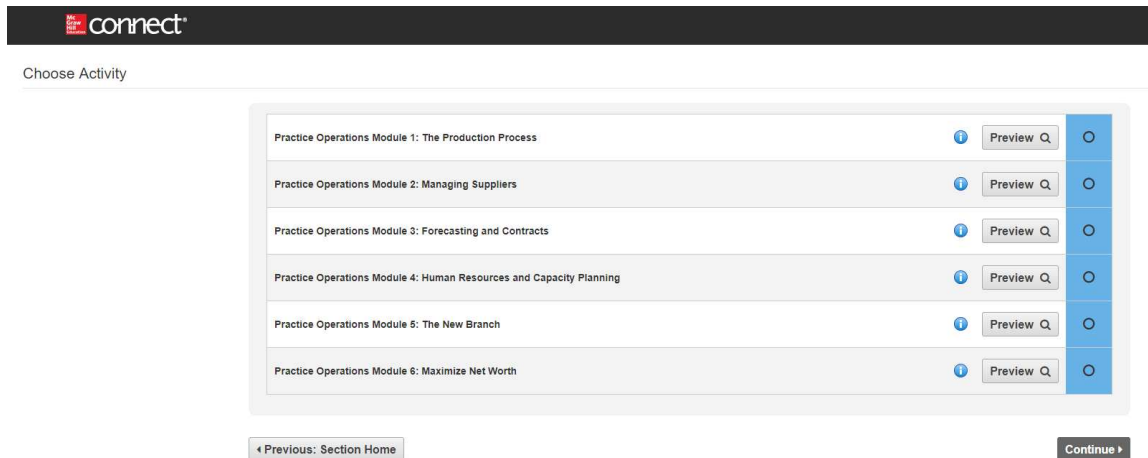
1. Navigate to [the Section Home for your course in Connect.](#)
2. Click on “Add Assignment” to open the new assignment options.



3. Click on **Application-Based Activity**.



4. The Practice Operations modules will appear as available activities.



From this screen, you can play a module by clicking the **Preview** button () or you can display the basic information about each module by clicking the **Information** button ().

5. Click on the **Preview** button for **Practice Operations Module 1: The Production Process** to get started.
6. In a new window/tab, the simulation will start loading – this may take a short time, depending on your internet speed.
7. Once the simulation has loaded, you will be greeted by a welcome message.

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- You will note that Module 1 begins with an overview of the game. The purpose of the tutorial nature of **Module 1** is to orient you (and the students) to the game and the system – information is provided to you in various steps, and provides some direction as to how to navigate within the simulation.
- Once you are done reviewing **Module 1**, close out the window/tab to return to your Practice Operations course home page to access the other available modules.

Game Setup

Instructor Connect Account

Use your Connect login to access Practice Operations within your Connect course. Connect instructor details will be provided on request from your local McGraw-Hill Education Sales Representative. To contact McGraw-Hill Education, please select the nearest office from the list on these pages:

<https://www.mheducation.com/highered/support.html>

How to Log In

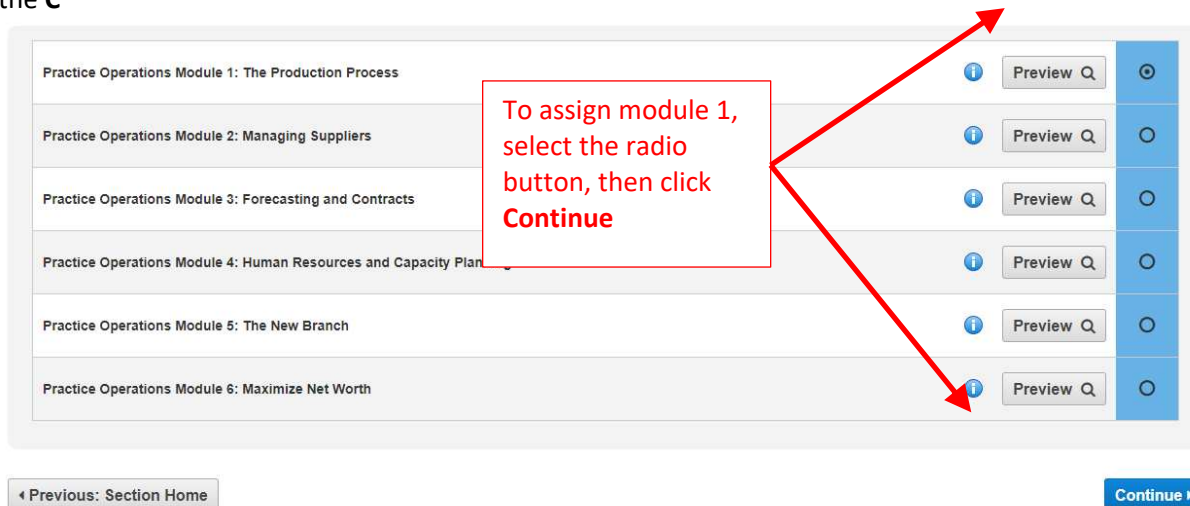
Once, you have received your unique Connect user name and password from your designated McGraw-Hill Education Sales Representative, you will be able to log in to the simulation:

- If you are using McGraw-Hill Connect you will be able to access the simulation through the **Add Assignment** option from your **Section Home**.
- If your Connect Account is synchronized with your learning management system, you will be able to access Connect, and thus Practice Operations, while logged into your LMS course.

Practice Operations will appear as an assignment in Connect when your students are logged in.

Creating Practice Operations Assignments via Connect

- Login to the Connect Section Home page for your course
- Click the **Add Assignment** link
- Click on the **Application-Based Activity** link
- Select the module you wish to assign by clicking the radio button next to the module, then click the **C**



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5. You will be asked to select the policies for this Practice Operations assignment. The first step is to enable/disable tutorials and to select grading weights.
- Select the radio button to enable/disable tutorials (note, unless your students are very familiar with Practice Operations, tutorials should be enabled to ensure student success).

Determine the weighting of the assignment score

Tutorial
The Practice Operations tutorial provides guided assistance to introduce students to key simulation mechanics. The tutorial for each module covers different aspects of gameplay. Student actions are often restricted while the Tutorial is active. Tutorial mode is defaulted to On and is recommended unless students are already comfortable with the simulation's mechanics.

On ☒ Off ☐

Assignment Weights
(Optional) Update the percentage each category contributes to the final score.

Reputation Score	15 %
Completed on Time	15 %
Net Worth	20 %
Goal Achieved	50 %
Total	100 %

Score weights can be adjusted manually, but must sum to 100%

◀ Previous: Choose Activity

Continue ▶

The scoring elements are

- Reputation Score - percentage of points to be awarded through a comparison of the student's reputation score to historical student scores.

$$scoreCategoryPercentage = \frac{(playerScore - categoryLowBound)}{(categoryHighBound - categoryLowBound)}$$

- Timeliness Score – the percentage of contracts completed on time is multiplied by the possible points to obtain the timeliness score.
- Net Worth – number of points to be awarded through a comparison of the student's net worth to historical student scores.

$$scoreCategoryPercentage = \frac{(playerScore - categoryLowBound)}{(categoryHighBound - categoryLowBound)}$$

- Goal Achieved – percentage of points to be awarded if the student achieves the module's goal

- Click **Continue** to proceed

6. The next step in Policies is to determine the assignment name/instructions, start/due dates, total points and number of allowed attempts.

- Enter an assignment name and instructions in the appropriate text boxes. Note that the assignment name is a required field.
- Determine the start and due date. Note that the due date is a required field.
- Enter the desired number of points (from 0-100) for this assignment. Note that this is also a required field.
- Select the number of attempts each student is allowed for this assignment. Click the **Assign** button to add the assignment to Connect.

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Selected Content:
Practice Operations Module 1: The Production Process

Assignment Name: *

Assignment Title

Instructions:

Add Instructions

Start Date:

mm/dd/yyyy hh:mm US/Mountain

Due Date: *

mm/dd/yyyy hh:mm US/Mountain

Points: *

0-100

Assignment Attempts Allowed:

1

* required

Back Assign

7. The assignment will appear in Connect.

Assignments + Add Assignment				
Title	Shared	Info	Start-due	Show/hide
<----- Drop an assignment here to remove from a group ----->				
Algorithmic Problems			not assigned	
BUS101 - Practice Operations Module 1			02/13/19-02/28/19	

Edit Assignment

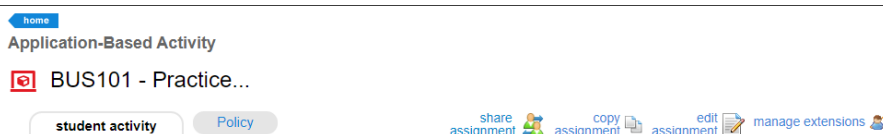
Once an assignment has been created, you can still go back and edit it at any time until the assignment becomes active (assignments cannot be edited after their start time). From the Section Home, click on the assignment name to view student activity or to make changes to the assignment.

Assignments + Add Assignment				
Title	Shared	Info	Start-due	Show/hide
<----- Drop an assignment here to remove from a group ----->				
Algorithmic Problems			not assigned	
BUS101 - Practice Operations Module 1			02/13/19-02/28/19	

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From the page that appears, you can complete the following actions:

1. View student activity by clicking the **Student Activity** tab.
2. Review the assignment policies by clicking the **Policy** tab.
3. Share the assignment with other Connect users.
4. Copy the assignment to allow other users to utilize it.
5. Edit the assignment policies
 - a. Keep in mind that a few things are not editable: you cannot change a game to start in the past. Also, you cannot create a new game in the edit mode.
 - b. All other areas may be edited.
6. Manage extensions to allow a subset of students more time to complete the assignment.



Grading and Metrics

Grades can be viewed by clicking on the assignment on the Connect Home Page. Instructors will also have access to an Excel spreadsheet that addresses the student's progress through the course. Here instructors will be able to observe how well students performed in various categories of the game, as well as know if each student was able to complete the module. In addition, the instructor can download an Assignment Report, a turn-by-turn summary of students' activities, and a scorecard of student performance.

Best Practice Tip

Instructors may want to consider having a replay option for their students. This option would allow students who did not successfully complete a module or students who completed the module but were highly engaged, the ability to play again. In order to do this, instructors will simply create an additional assignment.

Now Get Started

Now that you have the basics of how to set up and use Practice Operations, let's move into how you can present Practice Operations and turn it into a great classroom experience.

Classroom Introduction

The Game World

In a simulation-based environment, players have the opportunity to explore a wide range of variables; identify potential options and relationships; and control the various components of the system. The player navigates their way through an array of “real-life” decision points allowing them to exercise strategic thinking skills, analyze data, evaluate options, reflect on this input and practice decision-making; thereby acquiring conceptual knowledge while they play. Players experience immediate feedback on the result of their decisions and how they impact the goals of the exercise. This learning by doing in a risk-free environment results in improved knowledge retention and increases the desire to learn even more.

A well-designed business simulation strives to provide authentic concepts and activities, clear feedback, and challenging goals as well as a method for assessment of performance in a graphic-based, active technology-based environment. This experience feels like play, while providing students a rich learning experience.

Digital natives, otherwise known as the Net Generation, have grown up with games. This fact continues to challenge educators at all levels to incorporate new strategies into the learning experience. Digital natives typically see work as play and play as work, while also viewing technology as a natural part of life, and favoring graphics and animation over text – a combination that results in the ideal consumer of instructional simulations.

Thoughtfully crafted learning objectives serve as the starting point for the design approach of the simulation and provide the scaffolding for the game, facilitating important learning as each player changes roles during the game while working through the key activities.

Digital simulations also provide an opportunity for virtual performance assessment. Collection of game-based performance is integrated within the platform. The online collection of learner performance data, conducted in the background, has the added benefits of reducing both instructor workloads as well as “test anxiety” for the student.

Practice Operations is a simulation game designed to present players with a series of production-based scenarios, based upon specific set of learning objectives, allowing the player to practice mastery over the knowledge, skills and abilities necessary to function as an Operations Manager. The game provides an interactive, animated view of the elements of operations: production processes, supply chain management, forecasting and contracts and human resources and capacity planning in a five-module format. Practice Operations Management is designed with emphasis on the following key points:

- Diverse products and markets require students to emphasize different values within the operations process (value, cost, flexibility), and that requires them to use decision-making skills while adapting to dynamic elements within inventory management, capacity, production, sourcing, etc. Therefore, in the simulation, players are challenged to create different product designs to meet market conditions.
- The focus of the game is on product-based scenarios, which allows for the incorporation of production process design, capacity, supply chain, Just-In-Time inventory control, labor management, order fulfillment, customer satisfaction, and quality control.
- The game supports leader-board score competition among students within the individual focused scenarios.

Targets and Goals

Industry Connection: Knowledge, Skills and Abilities

The role of the Operations Manager is complex, multifunctional, and requires a wide range of both global and disciplinary-based skills, including the ability to coordinate, plan and direct activities and human resources to create products and meet departmental goals. The U.S. Bureau of Labor Statistics publishes the *Occupational Outlook Handbook*, which provides detailed descriptions of occupational groups and job categories. A companion resource, O-NET Online, provides information-rich reports for these same occupational groups, including current data from the national and state level on wages and employment, educational level, and detailed position descriptions.

O-NET Online summarizes the responsibilities of the Operations Manager as:

“Plan, direct, or coordinate the operations of public or private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. “

A sample of the tasks required of the Operations Manager include:

1. Oversee activities directly related to making products or providing services.
2. Direct and coordinate activities of businesses or departments concerned with the production, pricing, sales, or distribution of products.
3. Review financial statements, sales and activity reports, and other performance data to measure productivity and goal achievement and to determine areas needing cost reduction and program improvement.
4. Manage staff, preparing work schedules and assigning specific duties.
5. Direct and coordinate the organization's financial and budget activities to fund operations, maximize investments, and increase efficiency.
6. Establish and implement departmental policies, goals, objectives, and procedures, conferring with board members, organization officials, and staff members as necessary.
7. Determine staffing requirements, and interview, hire and train new employees, or oversee those personnel processes.
8. Determine goods and services to be sold, and set prices and credit terms, based on forecasts of customer demand.
9. Locate, select, and procure merchandise for resale, representing management in purchase negotiations.
10. Determine goods and services to be sold, and set prices and credit terms, based on forecasts of customer demand.
11. Develop or implement product-marketing strategies, including advertising campaigns or sales promotions.
12. Direct non-merchandising departments of businesses, such as advertising or purchasing.
13. Manage the movement of goods into and out of production facilities.
14. Recommend locations for new facilities or oversee the remodeling or renovating of current facilities.