Course Design and Delivery

Terry Taylor

COURSE DESIGN AND DELIVERY

Need to engage to enlighten

How to engage?

How to enlighten?
HOW TO ENGAGE?
Deliver the “aha” in class

• Facilitate the student discovering the “aha” in class, at least partially (aids in learning and memory)
  
  - Introduce concept to be applied with limited guidance
  
  - Structure #1: Theory session -> Case session: use for advanced topics
  
  - Structure #2: Case (or in-class exercise) session -> Theory session: use for basic or “unexciting” topics

HOW TO ENGAGE?
Deliver the “aha” in class

• Facilitate the student discovering the “aha” in class, at least partially (aids in learning and memory)
  
  - Introduce concept to be applied with limited guidance
  
  - Avoid assigning reading that reveals “aha” before class

Demonstrate relevance by tying back to current, real examples
HOW TO ENGAGE?

Pace the class: Anticipate when students will be tired and structure class session accordingly

• Break up periods when students will be tired and un-talkative with interesting content that will give them a break (e.g., a video that illustrates a concept) or engage them (e.g., a turn-to-your neighbor exercise)

Demonstrate passion for material, its importance

HOW TO ENLIGHTEN? – COURSE DESIGN

Have a simple, clear structure
- What will students learn in this course?

Publicize the structure
- Do not hide it

Have a manageable set of teaching points
Operations Principles

System performance is determined by the limiting resource (system capacity is the bottleneck capacity)

Process choices should be integrated, consistent, self-reinforcing

Uncertainty and variability are painful…

…but proper actions mitigate this pain

Operations Course – Learning Objectives

Understand problems and issues confronting operations managers

Obtain language, concepts, insights and tools to deal with these issues to gain competitive advantage through operations
Operations – Course Outline

Part I

Physics and Economics of Production and Service Processes

Module A

Process Analysis
(no variability)
- Kristen’s Cookies
- Process Types
- Shouldice Hospital
- National Cranberry
- Little’s Law

Module B

Variability in Processes
- Responsiveness in Service Systems / Queueing
- Manzana
- Queueing Psychology
- Factory Physics
(impact of variability in production systems)

Part II

Supply Chain Management

Simulation: Beer Game (at start, to kick off) → Case: Barilla

Tool: Newsvendor Model
Betting on uncertain demand

Applications

Inventory decisions
Pricing decisions
("revenue management")

Cases (or mini-cases)

Sport Obermeyer
Zara
American Airlines
Hyatt Hotels

Simulation: Littlefield (at end, to bring everything together)

System performance is determined by the limiting resource
  - Seat problem threatened production at plant
    (can’t build a car without a seat)

Process choices should be integrated, consistent, self-reinforcing
  - Toyota Production System integrated, self-reinforcing

Uncertainty and variability are painful…
  - Sources of difficulties:
    • product variety
    • variability in seats and installation

…but proper actions mitigate this pain
  - Relentless focus on
    • setup time reduction (to deal with variety)
    • variability reduction

HOW TO ENLIGHTEN? – COURSE DESIGN

Have a simple, clear structure
  - What will students learn in this course?

Publicize the structure
  - Do not hide it

Have a manageable set of teaching points
HOW TO ENLIGHTEN? – CLASS SESSION DESIGN

Have a simple, clear structure
- What will students learn today?

Publicize the structure
- Revisit course structure and say where stand today

Have a manageable set of teaching points
- Log them as they arise, summarize at end (repetition)

HOW TO ENLIGHTEN? – CASE SESSION DESIGN

How not to start a case discussion (mistake I made):
   Start by diving into an analysis

A better way
1. Start with a business decision: What is your recommendation?
2. Use this to motivate analysis
3. Log (the small number of) key points as they arise
4. Summarize the key takeaways, and connect to current business examples
HOW TO ENLIGHTEN? – THEORY SESSION DESIGN
How not to start a theory discussion (mistake I made):
    Start by doing theory

A better way
1. Start with an example/exercise (and motivation from current business practice)
2. Develop the general theory
3. Have them apply the theory to an example
4. Summarize the key takeaways, and connect to current business examples

HOW TO ENLIGHTEN? – DEALING WITH STUDENT HETEROGENITY

Work through examples as much as you can

Focus on making sure everyone (including slower students) understand the key fundamentals. Quicker students will tolerate, so long as class is engaging.

Get students to answer other students’ questions
CONCLUDING REMARK ON COURSE DESIGN

In designing a course, focus on communicating a few ideas and hit them repeatedly from different angles. At the start of the course, have in mind what are the few ideas that you want students to walk away with and structure the course in a way that draws out those ideas.

ADDITIONAL TOPICS FOR DISCUSSION

- Cold calling – Henry Chesbrough
- Motivating students to work to learn

HOW TO ENGAGE? - MOTIVATING STUDENTS TO WORK TO LEARN
SESSION 11: SUPPLY CHAINS FOR SHORT LIFE CYCLE PRODUCTS; REVENUE MANAGEMENT

Preparation
Prepare the Sport Obermeyer case for case discussion. You should be prepared to write on the board at the start of class your answers to the first question (parts (a) and (b)) and you should be prepared to articulate to the class your answers to the second and third questions.

1. Using the data given in Exhibit 10 (which, for your convenience, is posted to bSpace in Excel format), make a recommendation for how many units of each style Wally Obermeyer should order during the initial phase of production. Assume that all ten styles in the sample problem are made in Hong Kong. Ignore the minimum order quantity constraint in your initial analysis. For this question, assume that there would be no future production for these selections once a production decision is taken.