

Encouraging Critical Thinking in a Graduate Business Operations Class

Problem-Based Learning
2013-2014 ThinkAchieve Fellows Program

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Academically Prepared, Business World Ready



Outline

- The Course
- The Challenge
- Case Teaching the Problem Based Learning way
- Implementation

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The Course - Productions & Operations Management

Topics addressed:

- Production process selection
- Capacity scheduling
- Inventory management
- Product and process quality control issues
- Supply chain management
- Service operations management
- Project scheduling

Productions & Operations Management

- A tough course – lots of quantitative number crunching to contend with – students cringe 😞
- Builds a toolbox of quantitative tools – applied statistics, simulation, mathematical models, etc.
- Easy to bog down in detailed calculations – students can get stuck looking at trees rather than the forest

Productions & Operations Management

How we do this now:

- Flipped classroom for developing quantitative tools, using computer simulations and computer interactive problem solving
- Business case studies in lectures -discussions develop qualitative concepts and body of knowledge



The Challenge

Promote higher level critical thinking while simultaneously developing the body of knowledge and tools of the subject

Problem Based Learning offers a helpful framework



The Challenge

PBL - Three major principles

1. Relevance and authenticity of the work – students care enough to engage
2. Realism of the work process – students do
3. Reflection and self-awareness – students learn



Case Teaching the Problem Based Learning way

1. Careful Case Selection

- Business situation clearly related to tools and concepts in course module.
- Believable scenario that students could expect to encounter in their present or coming jobs.
- Authentic in that the problem and situation described realistically mirrors actual business operations.

Case Teaching the Problem Based Learning way

2. Create the Environment

- Must be as similar in complexity to the “real” business environment as possible (resources, information, etc.).
- Empower students to work the case with as little mandated “academic” structure as possible.

Case Teaching the Problem Based Learning way

3. Maintain the Environment

- Instructor provides support and challenges during the case analysis and development. This includes encouraging reflection on the process as well as the course material.
- Students primarily drive feedback and critiques of developing work – just like other stake-holders in a business.

Case Teaching the Problem Based Learning way

4. Closing Reflection

- Instructor facilitates reflection by students on their learning process and the body of knowledge evaluated and applied.

Implementation

- Pilot set to run this Summer session II
- 2 cases selected
- Group based – simulating management teams
- 3 session cycles with inter-group presentations focused on student feedback each time
- 3rd session with closing summaries and discussions based on analysis of final reports

Closing Thoughts

- PBL fosters engagement
- PBL assures relevance
- PBL promotes process and reflection –helping students learn “how to think”

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