Incorporating an On-Line Airline Management Simulation into a Senior Capstone Course

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Why a Capstone Course?

- Serves as a culminating experience allowing senior-level students the opportunity to synthesize their knowledge and apply that knowledge toward solving "real-world" issues/problems.

- AABI Form 201

  Each program MUST provide evidence of a significant culminating upper division experience. Examples of a culminating experience include a <u>capstone course</u>, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

Why Airline Online?

- Web-based application allowing student access from anywhere, 24/7
- Appropriate for Pro Pilot, Management, and other concentrations
- Requires students to remain actively involved and make a multitude of business decisions
- Creates competitive environment
- Produces a wealth of financial (and other) information
- Flexibility inherent in the application allows instructor to rank teams according to RASM/CASM (or spread), net profits, capitalization, etc.
- Allows incorporation of additional required projects

Overview of Decisions in Airline Online

- *Human Resources*
  - Matching the number and skills of employees to the size and activities of the company
  - Salaries and employee-related expenses
- *Finance*
  - Funding start-up and continued ops through stock market, loans and bonds
  - Start up costs: purchasing aircraft, offices, cargo handling centers, maintenance bases, personnel, etc.
- *Stock market*
  - Function
  - Buying and selling shares
  - Market cap
- *Marketing*
  - Advertising
  - Branding (upload logo)
  - Appraising the effectiveness of marketing strategies
- *Procurement*
  - Locating and purchasing aircraft
  - Aircraft costs
  - Delivery lead times
  - Efficiencies of scale

Overview of Decisions in Airline Online

- *Industrial relations*
  - Employees and unions
  - Reasonable wages
  - Acceptable working conditions
- *Tactics and Strategy*
  - Positioning yourself in the market
  - Differentiating your product from that of the competition
  - Increasing your profit and/or market share
  - The effects of code sharing
- *Business Analysis*
  - Making sense of financial and performance data
  - Using current financial reports and competitor data to your advantage
- *Teamwork*
  - Decision making as part of a management team
  - Effective delegation
  - Consequences of decisions on other departments within the organization

Overview of Course

- Simulation
- Business Plan
- Stockholder's Report
- Management Audit
- Adopt-An-Airline
- Weekly Analyses
- Reflective Portfolio
- Peer Evaluation

Approach

- Establish teams (3-5 students per team)
  - Students can pick
  - Or instructor can assign
  - Preferable to have diverse concentrations on each team (e.g., one Pro Pilot, one Maint, and one Mgt)
- Team members assume job titles (and discuss decision-making)
  - Dir of Maint
  - Dir of Flight Ops
  - Dir of Finance & Admin
  - Etc.

Approach (cont)

- Teams brand/name their airline
  - Public perception
  - Logo
  - Niche
- Teams spend at least one week reviewing Airline Online User Guide (~60 pages) before allowed access to Sim

Simulation Begins

- Recommend a Trial Period
  - No more than 3-4 weeks
  - Allows teams to figure out the Sim without fear of jeopardizing their airline
  - Students are more likely to "try things out" if they can plan on a reset before the "real" competition begins
  - Teams can further refine their strategy during this trial period

Business Plan

- Suggest the due date near the end of the trial period, yet prior to formal Sim start
- Length
  - Preference of instructor
  - Typically, 3-5 pages is adequate
- Provides direction and focus to management team
- Each team begins Sim with $100M, but is able to secure additional funding based on quality of Business Plan

Business Plan Components

- Company Description
- Organization & Management
- Service/Product Line
- Marketing and Sales Management
- Funding/Financials
- Appendices

Formal Airline Sim Begins

- Batch Update (1/4 FY) prior to each class period
- Sim Results for that quarter reviewed each class
  - RASM
  - CASM
  - Yield (RASM/CASM spread)
  - Fleet Size
  - Net Profits
  - Load Factor
  - Net Assets
  - Team Rankings

Formal Airline Sim Begins (cont)

- Teams must submit a weekly analysis each week detailing their decisions
- Each student maintains a reflective portfolio (turned in upon the completion of the Sim)

Annual Stockholder's Report

- Submitted by each team mid-semester
- Actual Stockholder's Report (Southwest) is reviewed in-class prior to completing this assignment
- Typically 4-5 pages, plus financial statements

Annual Stockholder's Report Components

- Brief synopsis of sales and earnings trends
- Explanation of start-up problems and how they're being overcome
- General financial health of the firm
- Discussion of dividend plans and policy, expansion plans, and future prospects
- Include financial report for your firm

Management Audit

- End of semester project
- Consists of written report and in-class team presentation
- Other faculty invited to observe presentation
- Everything during the semester leads up to this major project and presentation
- 6-10 pages plus 10-15 minute presentation

Management Audit Components

1. Did your initial strategy work? What did you change? How closely did you adhere to your Business Plan?
2. How were the functions of planning, organizing, directing, and controlling handled by your team?
3. If this airline were to begin again, what should be done differently?
4. If the management team were going to be transferred, what advice would you give to the new team assigned to manage this airline?

Management Audit Components

5. What was the airline's stance on company stock? Did your airline sell any? Were any dividends paid?

6. Did the team make decisions on a rational basis or did it often resort to guesswork?

7. Conduct a SWOT Analysis. What were the airline's strengths and weaknesses? What opportunities and threats exist?

Management Audit Components

8. At this point, is the airline financially healthy? Did your team try to "end-play" the simulation by selling all aircraft, selling all stock, or reducing expenses to unreasonable levels?

9. Was there any evidence of lack of teamwork in the firm? How could this be improved?

10. Financial statements and other data

Adopt-An-Airline

- To enhance the "real-world" application of the Sim and allow students to remain current on the airline industry
- Each team is assigned an airline to follow throughout the semester.
- They must remain aware of events affecting the assigned airline
- They must also research the history of that airline
- Typically 5-7 pages

Adopt-An-Airline Components

- History
- Corporate Structure and Mgt Philosophy (# of employees, org chart, corp culture)
- Current Characteristics (fleet size, cities served, target market, etc.)
- Company Events/News (that occurred during the semester)
- Insight (your thoughts on this airline, ways to improve, opportunities for future growth, etc.)
- Professional with references (photos and additional info in Appendix is also helpful)

Items Due Upon Completion of Sim

- Peer Evaluations
- Reflective Portfolio
- Management Audit
- Management Audit Presentations
- Adopt-An-Airline Report

Management Audit Presentations typically last 2-3 class periods depending on number of teams

Evidence?

- Upon completion of the semester, the instructor will have plentiful evidence of the student involvement during the semester and the amount of learning that took place.

- Students will finish the semester talking to each other in terms of RASM/CASM, load factor, fleet size, and more.

Final Thoughts

- This Airline Online Sim allows students the opportunity to actively learn and enjoy the learning experience.
- Many students comment that this is their favorite class in four years of college.
- Students spend many (up to 20) hours per week outside of class working on the Sim.
- Whether Pro Pilot, Mgt, Maint, etc., students finish the course with a much deeper appreciation of the complexities involved in managing an airline.
- Beware: Students are very competitive and take the Sim seriously!

Sample in-class slide

Yield
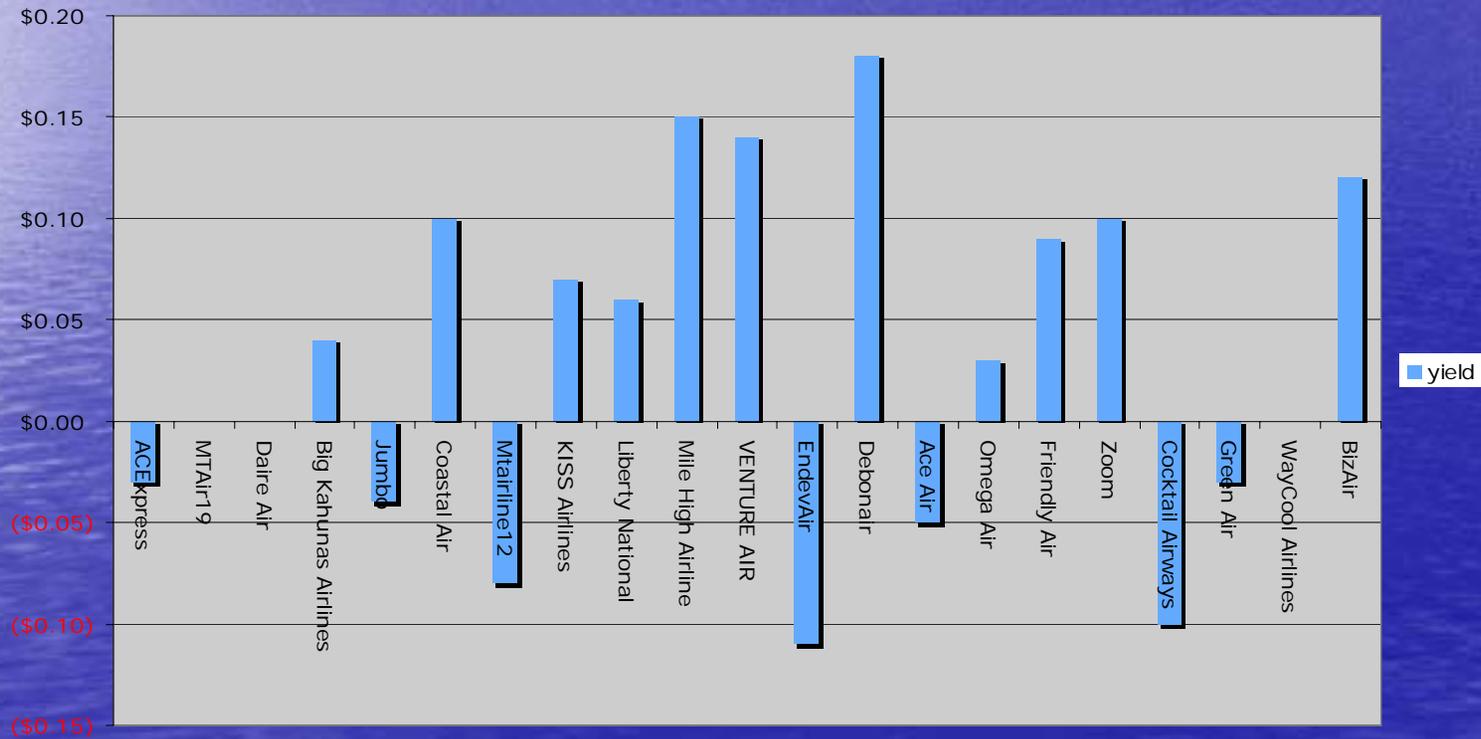
Questions?

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