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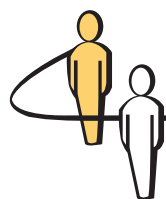
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Active Learning Projects in Service Operations Management

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Today's students have grown up in the Internet era, where they actively participate in the generation and consumption of information. To create and promote student interest in the classroom, business school faculty therefore have to actively engage them as part of the learning process. This article presents ways in which to incorporate active learning as part of a service operations management (SOM) course at both the undergraduate and graduate levels. We identify specific action learning projects for both levels, based on student maturity and business experience. These projects align with specific topics that are typically presented in a service operations management course. We also present a framework that provides insights for aligning the types of action learning projects with the nature of the data used and the types of intended outcomes. Student feedback suggests that there is significant value in these projects for both the students and faculty.

Key words: active learning; service operations

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1. Introduction

Despite the fundamentally applied nature of business education, business schools are often criticized for teaching highly theoretical concepts that have little, if any, real-world value (Pal 2007). This focus on theory can be interpreted as a reaction (or an overreaction) to the origins of the business school when it was frequently looked down upon as a “trade school” by the other colleges and schools within a university. There is now a growing emphasis on applied knowledge in business education, with the goal of achieving a more balanced position between theory and application. The need for more applied approaches in the classroom is further accentuated by the fact that we are now beginning to serve “net-generation” students (those born between 1982 and 1991) who have different learning styles and expectations, which suggests that faculty reconsider their pedagogies (Oberlinger and Oberlinger 2005, Prensky 2001). For instance, net-generation characteristics, such as their (a) digital literacy, (b) preference for experiential learning, and (c) need for interactivity and immediacy, are issues that need to be introduced in the classroom (Skiba and Barton 2006). As a result there appears to be a trend in pedagogies in higher education that is gradually evolving away from faculty-centric, lecture-based

instruction to student-centric, activity-based learning environments (Strage 2008).

Major pedagogical approaches that are based on student activity-based learning include experiential learning, action learning, and active learning. Experiential learning is the process of creating knowledge or learning by reflecting upon an individual's direct experience (Kolb 1984, Itin 1999). This would include visiting companies and seeing their operations firsthand. Learning based on experiences is shown to result in lasting and effective learning (Walters and Marks 1981, Mockler 1997). Action learning (Revans 1998) is a similar but somewhat different approach that focuses on learning through actions and experiences. With this approach, an individual or group of people work on real problems and reflect on their own or team members' actions and experiences. The action learning process typically consists of four stages: (a) planning, (b) action, (c) experience, and (d) understanding (Pedler et al. 1986). This four-stage approach clearly goes beyond experiential learning in that the persons involved purposefully plan and create the experience that is the basis for learning.

Active learning focuses more on engagement and is more broadly defined as an approach in which students actively engage in the learning process (Prince 2004). In Strage's research (2008), a third of

the respondents stated that the ideal professor uses a wide variety of active learning strategies. There are many ways in which students can actively participate, including (a) case studies, (b) technology like clickers or multimedia instruction, and/or (c) individual or group projects (Austin and Mescia 2001). Researchers (Cherney 2008, Graffam 2007) appear to agree that active learning requires students to use higher-order thinking, including analysis, synthesis, and evaluation, thereby providing a better foundation for improved learning.

Business educators have been adopting these pedagogies, and some variations of these approaches, in different disciplines. Mykytyn et al. (2008) report on using problem-based learning, an approach that emphasizes learning from experience, in information systems courses. Some graduate business school professors incorporate action learning in their courses by providing their students with opportunities to work on real-world consultancy projects (Fish 2008). Wagner and Ip (2009), on the other hand, provide action learning opportunities for their students in the virtual world of Second Life. *Second Life* is a virtual world accessible on the Internet. Users (called Residents) interact with each other through avatars (computer representations of themselves, or alter egos). Users can explore, meet other residents, socialize, participate in individual and group activities, and create and trade virtual property and services with one another or travel throughout the virtual world (the Grid). In a recent discussion, Heriot et al. (2008) extend the active learning approach in an operations management course, going beyond the confines of the classroom to engage students in consulting projects with actual companies. Williams and Chinn (2009) implemented active learning as part of a sport management course in which each student team used Web 2.0 technologies to create a real “viral” marketing promotion to increase attendance at a season-opening basketball game.

Sampson (2000) and Wright and Ammar (1997) highlight the difficulty in teaching operations management courses because many students do not readily comprehend the application of operations principles and strategies in the real world. Furthermore, traditional students in undergraduate courses usually lack the opportunities to address real-world challenges because few organizations are willing to involve inexperienced students with their business issues (Gardiner 2008). Simulation-based gaming, while addressing some of these limitations, is typically a highly abstract environment limited to manipulating high-level quantitative business parameters (Faria 2001). As such, it provides a better platform for students with some work experience to leverage

their knowledge but may not be appropriate for inexperienced students. However, McEwen (1994) points out that the most effective methods for improving critical thinking skills in business education involve practical task completion. Thus the challenge in operations management education in general and service operations in particular is to develop action-oriented approaches to learning that involve students in real-world activities.

The projects presented and discussed in this article are based on the active learning approach. Projects for undergraduate students are discussed in §2. Traditional undergraduate students in service operations management courses have limited or no business experience. As a result, the projects leverage the use of the Web to provide virtual experiences that are still based in the real world. We present these projects within the context of a framework for active learning, linking them to the typical topics covered in a service operations management course. Active learning projects for graduate service operations management students are then discussed in §3. Because most graduate students have either business experience or are actually employed while pursuing their degree, the action learning projects often take the form of consulting projects. This paper identifies the types of consulting projects graduate students can conduct. The discussion concludes with exploring the advantages and challenges to implementing these projects.

2. Undergraduate Active Learning Projects

Active learning projects in an undergraduate service operations course benefit students with limited or no business work experience. In this section, we introduce several projects that utilize the personal experiences of students to help them understand many of the key principles in service operations management. The use of personal experiences has the added advantage of providing a “hook” to capture the students’ imagination and interest, thereby making their own experiences relevant teachable moments.

2.1. Active Learning Projects Framework

The framework for active learning projects in an undergraduate service operations management (SOM) course focuses on the types of data used and the outcomes anticipated. Students collect real-world data, either through *experiential* projects or from Web-based *archival* data sources. Experiential projects require students to look at their own actions in a more objective fashion and help them evaluate the perceptions of their own service experiences. Archival data and customer-generated data are often maintained on the Web by industry, government organizations, and

Figure 1 Framework for Active Learning Service Operations Projects

Experiential	Managing waiting lines	- Process mapping - Making your voice heard
Input data		
Archival	- Service operations in the news - Analyzing flight delays	Addressing customer complaints
	Reflection	Outcomes Solution

news media. The projects are designed to deliver student learning on specific SOM topics, either through *reflection* or by recommending a *solution*. The framework and specific projects are shown in Figure 1.

We divide the types of active learning projects into two broad categories: those that involve (a) learning through reflection and (b) learning through recommending a specific solution. The first category includes experiential reflection- and archival reflection-type projects, while the second category consists of experiential solution and archival solution projects. We discuss these various types of projects in further detail in the following section and then specifically link them to typical topics in a SOM course.

2.2. Active Learning Reflection Projects

2.2.1. Managing Waiting Lines. Everyone, including faculty and students, experiences waiting lines. However, understanding waiting lines in services also requires an understanding of human nature. Unlike a typical analysis of waiting lines using quantitative analytic models (e.g., queuing theory), this project, which is based on the human experience with waiting, is ideal for a team project (with two or three students to a team), as it encourages students to share their perspectives. The instructions for this team project are given below.

- *Do you mind waiting?* What do you do when you are in a hurry and have to wait in line? Do you look at your watch every few seconds, huff and roll your eyes, complain to anyone in line with you (who will or will not listen), or do all of these? It is speculated that we spend about two to three years of our lives just *waiting*! However, waiting is a necessary consequence of limited capacity. So what can you do to reduce your stress while waiting or (as an employee) while you are trying your best to serve those in line? That is the focus of this assignment. Go to the website <http://www.jeffmowatt.com/individual/mindwaiting.html> and review the 10 ways managers can reduce the stress of waiting in line both

for customers and employees. Analyze any *three waiting lines* (in total as a team) you encounter in a given week. Then discuss how each one was managed by the service providers. See if they have used any of the strategies listed in the above website. If not, what else did they use? If they did not do much to relieve the stress of waiting, what could you suggest? Submit your analysis in a report (maximum four pages).

2.2.2. Service Operations in the News. This project is designed to increase student appreciation for the service operations function within an organization. Here students search, analyze, and report on a timely, interesting, and relevant operational situation of their own choosing. It keeps the course current and has the potential for enhancing in-class discussions of current business efforts, rather than relying primarily on the vignettes presented in the course text book. Faculty could use a course management platform (such as Blackboard) for students to post a summary of their findings (or the entire report) for the rest of the class to read. It also allows for greater control over the content, where (selected) entries can be archived for use by future classes in subsequent semesters.

An alternative approach to implementing this project is using Web searches and online subscriptions to search news sources along with the social bookmarking site <http://digg.com> to publish findings. Here, students can post their operations stories to <http://digg.com> under its Business and Finance section, reply to comments they receive, and comment on the stories that others (not necessarily those from the class) have posted. In addition to the project's expected instructional value, it also brings to life many of the concepts introduced in class through the use of a real-world setting. Also, students are often motivated to become more involved in a community of professionals with similar interests, an activity that we hope they will continue through the rest of their program and beyond. The quality of the articles posted is the main evaluation criterion for the <http://digg.com> project, while traditional methods for evaluating short or summary papers are used for

the Blackboard blogs. Both methods allow for a user (student)-generated knowledge base in service operations. This project is done on an individual basis; the instructions are given below.

- *Operations in the News!* Search through current business publications such as the *Wall Street Journal*, *Business Week*, *Fortune*, etc., and identify an article that illustrates one or more service operations issues covered in the course. Then do the following: (a) write a report discussing the related issues in the article (maximum of two pages). This includes identifying the issues and how the organization/firm addressed them. Submit a hardcopy of your report (include a full reference of the article) and a hardcopy of the article itself. By the same deadline, post a one-paragraph summary of your report on the course Blog on Blackboard (or another course management platform being used).

2.2.3. Analyzing Flight Delays. Travel delays have become a common experience that binds all of us. These could be air, rail, road, or sea travel delays. Such delays have an impact on a customer's evaluation of service quality. There are many factors that contribute to the significant variability in the on-time departures of airline flights. Specifically, the U.S. Department of Transportation keeps statistics on air travel. Therefore, this publicly available data can be used to study process variability using control charts. This assignment also has the added advantage of being executed in "real time" by collecting data on a daily basis for the duration of the assignment. Control charts, therefore, "come alive," instead of being based on a "text book" data set. It is helpful to require the students to submit their raw data, which allows the professor to verify their work. Also, requiring students to hypothesize the root causes of "out-of-control" observations is an excellent extension to this project. This is an individual project, and the instructions are given below:

- *Was your flight ever delayed?* The Bureau of Transportation Statistics (BTS), a statistical agency formed in 1992, is part of the U.S. Department of Transportation (DOT). Its mission is to develop transportation data that will result in information of high quality and to advance the effective use of this information in both public and private transportation decision making. Of specific interest for this project is the Aviation Program within the BTS, which you can be access at <http://www.bts.gov/oai/>.

- *Part 1: Pareto Charts:* Go to the [Airline On-time Statistics and Delay Causes tables and charts](#). Review the "delay cause definition" section. Then select any one of the major airlines (carriers) and a corresponding airport that it serves from the drop-down menu provided. Press the "submit" button to obtain the data. Draw a Pareto Chart for the causes of delays for

each of the past six months of available data. Comment on any changes you observe in the leading causes of the delays during this time period.

- *Part 2: Control Charts:* Go to the [Detailed Statistics \(January 1995—present\)](#) area of the "searchable database." Then select "Detailed Statistics: Departures." Then simultaneously select all of the following: scheduled departure time, actual departure time, departure delay, wheels-off time, and taxi-out time. Then select a major urban airport and a major airline carrier. Finally, select a period of time that is limited to a maximum total of 30/31 days for any combination of Month, Date, and Year. Press the "Submit" button to obtain the data. Now select a random sample of at least five flights per day for each of the days of data that you have. Develop both X-Bar and R Charts for both "departure delay" and "taxi-out time." Comment on the results. If some observations are found to be "out of control," hypothesize why this may have occurred. Also remember to submit your raw data. Please be sure you select an airline and airport combination that provides you with the above sample size.

2.3. Active Learning Solution Projects

2.3.1. Process Mapping. Students experience many services as customers. As such, they experience the benefits of services delivered well and the inconveniences and frustrations associated with poorly delivered services. This project is designed to help students learn from their experiences and to encourage them to look a little deeper into the service delivery process with the goal of improving it. The project typically involves mapping the process (as is) and then developing solutions to improve it along specific dimensions. Students can use process mapping tools such as Microsoft Visio or a free mapping tool (such as <http://www.smartdraw.com>) from the Web to map the process. The mapping approach that incorporates service blueprinting has proven to be the most beneficial, and it is also a template in Microsoft Visio, thereby making it easier to develop. This is an individual project, and the instructions are given below.

- *Can you improve it?* Draw a service blueprint of a service delivery process (as is) of your choice. The map should include the line of interaction, line of visibility, and line of internal interaction. You may use Microsoft Visio or any other process mapping tool. Identify three to five process performance measures that you would use as a manager of this process and briefly explain why you chose them. Then identify and explain (how and why) process improvements that you would make as a manager of this process to improve the process along the performance measures you identified.

Please draw the redesigned service delivery process that reflects your suggested improvements.

2.3.2. Making Your Voice Heard. The purpose of this assignment is to encourage students to purposefully reflect on their own experiences as customers of services using the concepts of service quality, customer satisfaction, and customer loyalty/retention. This assignment brings the often-used “letter writing assignment” into the 21st century. There is much more to it than just the letter-writing part. Students write letters of complaint and kudos to companies of their choice based on their customer service experiences. The experiences should be current (i.e., having taken place in the recent past or during the semester when the course is taught). However, the new twist to this assignment is that the students should submit these letters through a customer feedback management website. Another purpose of the assignment is to have students reflect on how companies respond to real customer complaints. This can be done as formally/informally as the faculty desires. Students can report their experiences of company responses (if any) to the class, and the class can usually see examples of both good and bad business practices in relationship to customer complaints/kudos management.

The reason to write the “thank you” letters is to highlight the fact that many people and firms do a good job, but they usually go unnoticed. It helps those who do a good job to be told that, and it recognizes that they have been noticed, which is a powerful motivational tool. In addition, students can also see that a high-quality world of goods and services is imaginable, feasible, and very real.

As a practical matter, depending on class size and technology issues, faculty may require students to submit a hardcopy copy of the letter sent via a company website. The customer feedback management firm <http://planetfeedback.com> is used in this assignment. Students can also submit feedback letters through other equivalent sites or through a company’s own website. A Web 2.0 option allows students to use <http://yelp.com>, where they can post their complaints/kudos on services on this social networking blog site that is specifically designed for it. Students could also blog on their own or other specific blogs. This is an individual assignment, and the specific project instructions are given below.

- **Got Feedback?** Feedback is a critical element in improving the quality of services. This assignment requires you to take an active role as a customer and to provide feedback to organizations. These can be for-profit, not-for-profit, or government agencies. Remember that it is just as valuable to give kudos as it is to complain!

- Write one letter to an organization that recently provided you with services/goods. The letter

should be submitted through <http://www.planetfeedback.com> or <http://www.complaints.com>. It should be a “letter of congratulations” for a job well done or a “letter of complaint” for not meeting your expectations. The letter should not exceed two pages and should include: a description of the service situation, reasons for kudos or complaint based on your expectations and what you experienced, and suggestions for improvement, including comparisons with competitors or other similar services. The letter should reflect an understanding of the principles of service quality. You should also submit copies of responses and of any follow-up letter(s). You should submit a copy of each letter electronically at the time it is sent from within the website (enter the professors email address in the cc: section of the form), or if that is not possible, send an electronic copy of the letter as an email attachment to the professor. The email time stamp will be used to establish timely submissions. As a backup, please keep a hardcopy of your letter.

2.3.3. Addressing Customer Complaints. Service quality is multifaceted and is usually defined in textbooks by its various dimensions. This project focuses on making these dimensions explicit to students by requiring them to undertake an analysis of actual customer complaints. By doing so, students will not only create an awareness of these dimensions, but they will also develop an appreciation for the challenges service managers face in delivering these different dimensions throughout the service delivery process. It also highlights another challenge in service operations, one in which different customers receive the same service but evaluate it differently (and subsequently have different complaints), thereby emphasizing the heterogeneity of the customer experience with respect to the same service. The project also provides an opportunity for students to better understand the difficulty in responding to the service delivery challenges. This is a team assignment (two to three students per team), and the instructions are given below.

- *How can we help you?* Actual customer complaint letters for a specific service (e.g., banking) can be downloaded from the customer feedback site <http://www.planetfeedback.com> or <http://www.complaints.com>. A sample of 50 letters per team should be used. Then, members of the team read the letters carefully (the sample can be split among the team members). The team then classifies the various complaints using the different dimension(s) of service quality: reliability, responsiveness, assurance, empathy, tangibles, and any other dimension that the team deems appropriate. The team should also classify the types of solutions or requests being made by the customer to improve the service. In addition, each team

Table 1 Mapping Typical Service Operations Topics to Projects

Typical topics	Project type	Sample projects
Introduction to services	Archival/reflection	Service Operations in the News: Types of services
Globalization of services	Archival/reflection	Service Operations in the News: Services in U.S. and non-U.S. countries
Service strategies	Archival/reflection	Service Operations in the News: Strategies being adopted by services
Service innovation (creation)	Archival/reflection	Service Operations in the News: Service innovation discussed on Business Exchange—Service Innovation
Service innovation (delivery)	Experiential/reflection	Evaluating New Online Services: Evaluate http://www.yelp.com for restaurant reviews
Project management	Experiential/solution	Personal Project Planning: A home improvement project using Home Depot's how-to website
Process analysis	Experiential/solution	Process Mapping: Analysis and redesign
Service quality (six sigma)	Experiential/solution Archival/reflection	Making your voice heard Analyzing flight delays Analyzing customer Complaints
Service supply chain	Experiential/reflection	Process mapping
Managing capacity and demand	Experiential/solution	Managing waiting lines

can make its own recommendations. Lastly, the team submits a report outlining the complaints, as well as the suggested improvements (maximum four pages).

2.4. Integrating with Course Curriculum

Although some of the above projects are associated with specific topics such as service quality, others may be used more broadly across many of the typical topics in a SOM course. We identify some key topics and associated project suggestions in Table 1.

The most general of the projects is the *Service Operations in the News* project. Here, the focus of the news stories can be a specific topic. For instance, when learning about service innovation, students can research news articles on how companies introduce new services, or they can obtain a better understanding of the globalization of services by reviewing the news about services in various countries. The *process mapping* project facilitates how to conduct a process analysis and to map a service supply chain. Table 1 highlights additional projects and their respective course topics. When learning about delivering innovative services, students can actually evaluate new online services, such as the <http://yelp.com> for restaurant reviews, or social media services, such as <http://twitter.com>. Students can plan personal projects (e.g., a home improvement project using Home Depot's how-to website) to obtain a real-world view of project management. Finally, students can better appreciate the management of supply and demand within a service context with a project that analyzes actual waiting lines that they experience as customers and which also includes recommendations for improvements that address both actual and perceived

waiting times, with emphasis on their understanding of the psychology of waiting lines.

3. Graduate Active Learning Projects

Active learning in graduate SOM courses, or courses with a strong service emphasis, can leverage the work experience of students through the use of service operations consulting projects. These are typically operational problems that students currently experience in their jobs (if employed while in the course) or have recently experienced. As such, all these projects fall in the experiential/solution quadrant in Figure 1. The project details are discussed below.

This is preferably an individual assignment in which the student develops a solution for an operational issue within his/her firm or organization. The challenge here for the student is to define the problem. This is a very worthwhile exercise because problem formulation is among the most challenging phases of a consulting assignment. There has to be an ongoing dialogue between the student and faculty within the first three weeks of the course to properly define the problem of interest. Typical operational issues that exist in many service organizations are related to process improvement, quality improvement, new service development, and project management. The student should provide a working title and a brief outline by the end of the second or third week in the semester. This first milestone helps keep the overall consulting project on schedule.

The second milestone in the consulting project is at the midpoint of the semester. At this stage, each student should submit an outline of his/her project.

Typically, a short PowerPoint presentation (about six slides) should suffice. This requires the student to focus on the final project deliverables, as well as on providing an early warning if the project is not proceeding as planned. It also gives the student an opportunity to modify the project depending on what is actually occurring in the student's organization. The third and last milestone is the submission of the final consulting report, which can take the following structure:

1. Introduction: What is the industry and company/organization context for the problem?
2. Problem definition: What is the specific scope of the problem that is being analyzed in this consulting project?
3. Measurement and analysis: What are the measures, and what are the data being used? How were the data collected? What tools are used in the analysis? Perform the analysis.
4. Recommendations: What do you recommend?
5. Implementation challenges: What challenges do you anticipate in implementing your recommendations?
6. References: Include any references you cited in the report.

It is especially important to emphasize step 5 because, while recommending a solution to service operations issues is a challenge, its implementation is a far greater one. Students should therefore also focus their attention on developing implementation plans and contingencies, which will also identify the real difficulties in managing change in service operations.

There are two specific areas of caution in conducting such consulting projects. First, the issue of confidentiality is very important to address at the very beginning. This is one of the main reasons to keep this project as an individual student project so there will be no need to share company information with other students. Faculty should consider volunteering to sign confidentiality statements with the student's company. In addition, the professor should inform the students about how to present information that can keep their organization anonymous, both in the written report and in a presentation (if that is required). The second issue is one of risk to the student. Depending on the culture of the organization in which they work, it is always useful to advise students to recognize this issue when selecting a project. A well selected project can actually significantly help their individual careers.

A short list of actual service operations consulting projects conducted by the authors' graduate students are listed below.

- Service Strategy
 - Business continuance management (local government legal services)

- Improving gelato and coffee shop operations (small business retail services)
- Minimizing risk exposure to financial instruments and products (retail banking services)
- Process Improvement
 - Improving the account settlement process in corporate investments (financial services)
 - Upgrading the ticketing system at a professional sports stadium (entertainment services)
 - Improving development efforts at an overseas interactive marketing agency (marketing services)
 - Improving accounts receivable at a commercial HVAC firm (maintenance services)
- Forecasting
 - Improving software release forecasting (software development services)
- Quality Management
 - Customer satisfaction and retention (commercial maintenance services)
- New Product Development
 - Athlete rehabilitation and training management (technology services)
 - Improving product enhancement requests management process (software development services)
- Inventory Management
 - Managing availability at a city car rental location (car rental services)
- Project Management
 - Improve project management at a county IT department (local government IT services)

For students who are unable or unwilling to work with an actual firm, a research-based project option has to be made available. Specifically, this should not be a report on a specific company (e.g., a study on Disney), because information regarding actual operational details is usually not available. Here students should follow a structure similar to the one given above, with the following variations. The focus should be a service operations management problem that is common to more than one company or industry. Students would research the literature on different case studies in step 3 above and provide a summary of broadly accepted recommendations or best practices in step 4. In step 5 they should discuss the challenges faced by companies implementing these solutions. In addition, they should provide a detailed list of references.

4. Conclusion

There are several issues regarding the implementation of active learning projects in a service operations management course that are based on student feedback and experience. Earlier we made suggestions regarding the appropriateness of individual or

team effort for different types of projects. Also, we have identified specific course topics for each project. Regarding project submissions, the choice between hard and soft copy is left to the individual faculty member. However, experience has shown that requiring hardcopies in class encourages timely submissions without the need for monitoring, especially when faculty are more comfortable with grading printed assignments. Softcopy submissions via any course management system are suitable when such platforms are available and when faculty are comfortable grading them. However, it is strongly advised that email submissions not be allowed because it not only creates problems with tracking and management but also could be a potential security threat to faculty computers. In addition, we recommend that faculty assign only a small percentage of the overall course grade to these projects, which should not exceed 15% of the total course grade at the graduate level and 10% at the undergraduate level. (This recommendation typically applies to courses when other traditional evaluation methods such as exams and problem-solving assignments are included.) In addition, a tiered approach to grading individual projects (e.g., zero for nonsubmission and then a low-medium-high score) would be most appropriate at the undergraduate level because of the significantly subjective nature of many of the projects. We recommend the use of traditional grading schema for the quantitatively based projects. At the graduate level, enforcing the milestones significantly improves the quality of the consulting report because students are continually working on their projects throughout the semester. This also allows for changes to be incorporated as new material is covered in the course.

Finally, a discussion of these projects would not be complete without a few comments on the impact these projects have on the students themselves. At the graduate level, some of the recommendations in the operations consulting reports have been adopted by the companies or organizations that employ the students; some projects have resulted in professional advancement and recognition in their field (one student received a bonus based on the report), and certain projects have helped students transition into other areas in their organizations or into new fields. The key to success with these projects, however, is in ensuring that students select projects that are of professional value to them. Managing the variety of projects submitted can require significant effort on the behalf of faculty, but it is certainly worth the effort when students realize some of the above-noted benefits. There is also another intrinsic value to faculty in implementing these consulting projects: it provides an excellent vehicle for faculty to develop

in-depth knowledge about the firms and organizations in their community.

At the undergraduate level, linking course material with the events in a student's life in meaningful ways is not simply about using current technology. It is about being relevant to their daily lives. Specifically, the project on *Making Your Voice Heard* has been used in this format for nearly a decade by the authors and has also had the most impact on students. Here are some of the actual outcomes of this assignment.

In response to a student's kudos letter for a furniture store sales person, the company involved bought lunch for all of the store's employees. In another case, a kudos letter regarding a sales person at a car dealership resulted in the sales person receiving a \$500 bonus. Such examples also remind students that we need to stop to recognize good service when it is provided. This is especially important in a world where customers are quick to complain but very slow to show appreciation. On the other hand, some students gained personally when companies addressed their complaints. A complaint to an online payment system firm resulted in that firm reimbursing the student \$450. In another case, a student's complaint regarding a hotel stay resulted in the company refunding the student half her costs (\$300) because she complained about being treated rudely when checking in late one night. Another firm refunded a student \$369 who was charged at the end of his car lease for "overused tires." These examples help students understand their rights as customers and that they should expect to be treated fairly and professionally. However, the true success of this project is that students often request information about the complaints management website (<http://www.planetfeedback.com>) after they have finished the course and often even after they have graduated.

Active learning that is designed to take students' business experiences into consideration has proven to be a very effective learning experience. It can be incorporated effectively in service operations management courses at both the undergraduate and graduate levels. In addition to benefiting the students, it also provides faculty with a mechanism to remain constantly connected to both their immediate business environment and to a wider global service operations environment.

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