

Classroom Minicases

Editor's Note: This is the third of a series of papers to be published by the Journal of Information Systems Education (JISE) that will provide readers with minicases that are appropriate for use in the IS classroom. We encourage other authors to develop and submit minicases, usually two per paper, that can be used in IS courses. We hope that this is a useful service for JISE readers and that it will become a regular publishing area in JISE.

Technical Staffing Crises and Managing Systems Projects

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ABSTRACT

Case method teaching is not limited to larger, complex cases. It is often useful to supplement classroom discussions with short cases, ones that have been targeted for one or two discussion points that challenge student thinking beyond the usual lecture or textbook. These shorter cases are called 'minicases.' The objective of a minicase is to broaden the thinking of students by raising difficult, focused questions. Discussing shorter cases provides an opportunity to think carefully about key issues and to challenge conventional thinking without the overhead of preparing a larger case. Minicases can provide the bases for stimulating classroom discussions, with students being asked to read, analyze, and discuss them within the context of a single class. Or, they could be utilized for homework assignments. Or, minicases might even be useful as essay questions on exams or as tools in assessing student-learning outcomes. This article presents two focused minicases that an instructor can use in a typical information systems overview course. The first of these deals with a project crisis brought on by the loss of a critical software developer and the second with perplexing problems managing key technical personnel. For each case, a discussion of how to use the minicase effectively and a suggested solution are provided. This is the last in a series of three articles appearing in JISE dealing with the topic of IT Minicases.

Keywords: Information Systems Education, Case Method Teaching, Project Management, Managing Diversity

1. INTRODUCTION

1.1 Small Case Studies

Teaching using the Case Method is not limited to only large complex cases. The use of small cases as descriptive sidebars to illustrate topics in business textbooks is common. But short cases can also be used to engage the student in an interactive learning experience that requires grappling with difficult issues and formulating well reasoned analyses for problems posed.

It is often useful to supplement classroom discussions with short cases, ones that have been targeted to illuminate

one or two precise points that challenge student thinking beyond the usual lecture or textbook. These shorter cases are usually no more than a few paragraphs in length, often a page or less. They are called 'minicases.' The objective of a minicase is to broaden the thinking of students by raising difficult, focused questions. A wide range of topics, of course, can be targeted, and these kinds of cases can greatly enhance the classroom experience for students. Minicases provide opportunities to think carefully about key issues, and often to challenge conventional thinking in ways that textbooks normally cannot do. Also, for professors who are interested in using the case method in their teaching but are

unsure how to do it effectively, using minicases provides a venue for getting experience with the process of case teaching with little pedagogical risk.

1.2 Using Minicases

Shorter cases can provide the bases for stimulating classroom discussions, with students being asked to read, analyze, and discuss them within the context of a single class. Or, they could be used for homework assignments at an appropriate time during a course after related readings and lectures have been completed. Or, minicases might even be utilized as essay questions on exams or as tools in assessing student learning outcomes.

Case studies, large or small, provide a form of synthetic experience for students. Few students have experience in all facets of business, even at the MBA level. What good cases provide is a way to explore real business problems and significant issues that occur in real business situations (Barnes, Christensen, and Hansen, 1994; Krause, 2005; Quattrone, 2006). Exposure to cases is closely akin to having real experience in the situations depicted. For example, suppose a business graduate faces a new situation that he or she has only encountered previously in the classroom as a case study. Even if that graduate has never been in that situation before, the case exposure puts the graduate in a position as if he or she actually has some related experience. This is because the graduate has already examined many of the issues involved and made some preliminary judgments, just as someone with experience in the area would have done. A graduate who has worked through a range of cases has familiarity with a wide spectrum of practical situations that he or she may one day encounter in business. Clearly, this is a profoundly important aspect of business education. And minicases can play a central role in providing this kind of critical analysis and understanding for business students.

1.3 Overview

The primary objective of this paper is to present two minicases that an instructor can use in a typical information systems overview course that offers a survey of topics and principles and is geared to exploring how such information systems are utilized in modern business organizations. Overview courses like these are typically found in various forms in graduate MBA and undergraduate BBA university degree programs, or their equivalent (Avison, 2003; Giullian, Odom, and Totaro, 2000). This paper presents minicases that can be utilized to stimulate discussions and supplement examinations in these kinds of IS courses. The author has often used minicases successfully in such information systems courses in the past. Topics range from information economics, to questions of ethics, implementation issues, user relations, loss of critical resources, concerns about diversity, and beyond. This article presents two minicases, as described below, to demonstrate the kinds of issues and problems that can be addressed in the classroom using this technique.

All of the events depicted in these minicases are true, though the names of the companies involved have been withheld and the names of the participants are disguised. The companies are all successful, global or regional firms that are among the leaders in their industries. In the text that follows,

each minicase discussion employs the same three-part format. The first section for each minicase consists of a *recommended approach* for use in the classroom. This includes a review of the subject matter related to the minicase and its intended focus. The second section presents the body of the minicase. This includes the *minicase description* and the associated *discussion questions*. The third section for each case includes a *suggested solution*. It is called a 'suggested solution' because other valid viewpoints may emerge during discussions. The suggested solutions, then, are really a short 'teaching note' to assist the instructor in preparing for discussion leadership. Finally, concluding each of these solutions is a brief summarizing the actual 'real life' outcome for each minicase. These outcomes are not necessarily *solutions* for the minicases. They only reflect what actually happened and should be presented to the students only after case discussions have been completed. The outcomes help to provide the students with closure for the minicase discussions.

Finally, because the order of topics in an information systems course can vary depending upon the text and preferences of the instructor, there is no intended order of presentation for these minicases. Therefore, the cases in the presentation that follows can be utilized in whatever order an instructor determines to be appropriate for his or her course.

2. MINICASE: A SOFTWARE PROJECT CRISIS

2.1 Recommended Approach

2.1.1 Subject Area: This minicase deals with the technical leadership of software development projects. Every project team has a few key technical leaders whose vision and understanding influences the directions taken and ultimately shapes the work product for the whole team (Armour, 2005; Ramaswamy, 2000; Sengupta and Abdel-Hamid, 1999; Xia and Lee, 2004). When one of these key players is lost, it can be devastating for the entire team and even for the future of the project. Students need to confront the issues that result when a really critical human resource is lost in a technical setting. This happens too often in IT organizations and can be a source of serious problems for a firm.

Another secondary issue surfaces in this minicase. It is well understood among programmers, systems designers, and other computer professionals that, after working on a system for a while, they are the only ones who really know how that system actually works. And being the only ones who understand the design and inner workings of an important system provides a kind of mystique and even a form of 'job security.' If no one else understands a key part of an important system, then the technician involved is 'bullet-proof' and cannot be fired. This means that technical people can develop a vested interest in not documenting their systems work adequately. And this seems to have happened in this minicase as well.

2.1.2 Intended Focus: This minicase depicts an extreme situation, one in which the technical heart of a project team was ripped out in the middle of their project. This is ultimately a case about staffing and contingency management. The objective here is to point out the folly associated with relying on one technical leader without

providing for redundancy of critical skills on the project team.

2.2 Description and Discussion Questions

2.2.1 Minicase Description: Clayton was the top programmer at his Atlanta-based company, which meant he was very good because his company was a highly successful software vendor. Its products included a host of complex software packages for large-scale servers and mainframe computers that were used by most of the Fortune 500 to do their daily processing and to manage their information technology infrastructure. Clayton was, in fact, the principal author of the most successful software system that the firm had, an ingenious system that allowed different computer architectures to mimic one another creating an environment in which there was a high degree of operational compatibility among diverse platforms. Over the years, Clayton had accumulated a lot of bonus money for his contributions to the firm. He used some of it to buy a farm in Grapevines, Georgia, just outside of Atlanta. He became a gentleman farmer, living and working in Atlanta during the week and farming in Grapevines on the weekends. Farming was relaxing for him.

Clayton was a genius programmer and brilliant system designer. Over the years, he had envisioned other software packages, all of which had been successful products for the firm. His latest was a sophisticated storage management system for large-scale servers. Clayton was project manager, as usual, and his team consisted of seven programmers whose various roles on the project were essentially as Clayton's private army of helpers. The project was in its second year of development and, by all accounts, it was fully designed and about half developed. Customers of the firm who had learned of the planned capabilities of this system were anxious to get a copy of it as soon as possible. This was going to be another great product for this company. Then, one sunny weekend day, Clayton turned his tractor over in a Grapevines peanut field and was killed instantly. Chuck, a very good programmer with about ten years of systems development experience, was eventually hired to replace Clayton. As he began to assemble the records of the project, it became clear that most of the project detail had been in Clayton's head and was not documented anywhere.

2.2.2 Discussion Questions: What are the issues here? Do you think that this project can be salvaged? What are the implications if it is not? What should Chuck do? What conclusions can you draw from this case?

2.3 Suggested Solution

2.3.1 Student Background and Approach: This is a case about managing technical projects. Losing key players on a systems development project team is often devastating for the project. This minicase raises issues concerning mitigating project risks that are associated with the loss of critical expertise in the middle of a project. The important skills of the lost employee are not just technical, but may include specific knowledge of and credibility with the users, or understanding the history of the project, the strengths and weaknesses of fellow team members, the unique company and project environments, and so forth. Therefore, replacing

a key team member with someone else of equal technical ability does not really make up for the overall loss of critical expertise in these situations.

In this minicase, Clayton was not only a key member of the team. He was the creative force behind the entire project. He was allowed to be in that position by company management, who paid dearly as a result with significant delays in the development of a potentially very important product. One point brought out by this minicase is the need to organize project teams with redundancy of skills and documentation of work product, so that, if a key player is lost, the team has a better chance to recover and complete the project.

2.3.2 Actual Outcome of this Minicase: So, what actually happened? The project was delayed for two years during which time the project team was disbanded to work on other projects and nothing was done. After that time, the project team was reconstituted and the effort restarted with Chuck back in the lead. The new software product eventually got to the marketplace, but by the time it arrived, two newly completed competitive products had already reached the marketplace. Those competitors significantly undercut this new product's impact. Eventually, it did prove to be a successful product for the firm, but it was never the 'block buster' that it could have been if it had been released years earlier.

In this minicase, students are generally at a loss as to what to do. They focus on the unfortunate death involved here. The real learning in this context results from coming to grips with the loss of a key project resource, dispassionately considering how to recover from that loss in the short term, and protecting other similar projects from such losses in the future. Ultimately, this minicase is about managing the inherent risk that is associated with every information systems development project. If students begin to recognize the complexity of managing risk in these situations, then they will have learned key lessons here.

3. MINICASE: A TOWER OF BABEL

3.1 Recommended Approach

3.1.1 Subject Area: This case deals with cultural issues in developing application systems software, in particular with issues of staffing and managing software projects in an international setting. Staffing and managing teams is a critical part of succeeding in these situations, and teambuilding is a key leadership skill in this minicase (Ahlawat, 2006; Barki and Hartwick, 2001; Chen, 2005; Davis, 2005; Richardson and Denton, 2005). Building an effective team is especially difficult if a manager must join a project that is already underway, in which the attitudes and norms for the team are already formed and must be reformulated.

3.1.2 Intended Focus: In this short case, the team is an unusual mixture of diverse cultures, which in itself is an interesting point for discussion. The cultural aspect exacerbates the other issues in the case because the project manager does not want to move too hastily and accidentally offend any of the cultural subgroups on the project team. The

main focus here is to examine what it means to have an *indispensable* member of a team. And having a husband and wife on the same team complicates this minicase even further.

3.2 Description and Discussion Questions

3.2.1 Minicase Description: Anna was an information systems project manager with a large international financial institution based out of New York City. She had joined this firm six months earlier after completing her MBA because she had wanted to gain international systems experience, travel the world, experience new cultures firsthand, and meet new people. Her new firm had recently lost its pre-eminent position in its US markets because it was not well represented in the international marketplace. Anna had learned that this company's new strategy was focused on expanding internationally. She reasoned that the firm would have to put computers and networks overseas to support its new strategic thrust and there would be opportunities for overseas assignments. So, she pursued and won a position with the firm. After six months, her opportunity came knocking! There was a project based in Germany that was more than a year behind schedule. It was called ICAS, for International Current Accounts System, and it was in trouble. Anna's previous record with the firm in several smaller projects had been very good and she was 'tapped' to take on ICAS. Anna was delirious; her personal strategy to get overseas on a company expense account had actually worked! She put her affairs in order, hopped a plane, and headed for Frankfurt am Main.

The ICAS project team consisted of about a dozen Europeans from all over Europe, two Australians, and a couple of Americans from the New York office. The project had been under way about three years. Anna quickly determined that the team was very capable, and the source of their problems actually came from 'down under.' The two Australians were an older, highly experienced 'husband and wife team' who had been with the project from the beginning. It soon became clear to Anna that SHE was really good and HE was really not. The wife was a hard worker, extremely capable, brilliant actually, and dedicated. Everyone in management and on the project team viewed her as crucial to the ultimate success of the project. People even said she was indispensable. Her husband was another story. He was manipulative, sneaky, probably lazy, and not very competent. He was quietly uncooperative, sort of 'passive aggressive,' and he knew he could get away with this behavior because of the importance of his wife's role on the project team. And she aggressively protected him. ICAS was a strategic system for the firm's international aspirations, and the executives in New York wanted it finished and implemented immediately, if not sooner. Anna was concerned that the Europeans would perceive her as an 'ugly American' and resent her taking charge of the ICAS project to which they had devoted so much time and energy. She was also concerned about how to build this diverse group into a team. Anna surveyed her situation and began to chart her course...

3.2.2 Discussion Questions: What are the cultural pitfalls that Anna should avoid here? Is anyone really indispensable

on any project team? What are Anna's viable options here? What are the pros and cons of each option? What should she do?

3.3 Suggested Solution

3.3.1 Student Background and Approach: This case provides an opportunity to discuss international information systems and the impact of cultural differences on projects. The project team was very professional and very diverse, with an English woman, two German men, a German woman, an Italian man, a Frenchman, two American men, a Spanish woman, an Irishman, and the two Australians included. Managing the cultural diversity was a challenge here and is a good discussion point. Building a real team out of this group required focusing intensely on project objectives. It would not do for anyone to 'get the idea' that management favored any one group over the others. Focusing on project goals and technology during decision-making and being careful to communicate that focus dispelled perceptions of cultural bias that might otherwise have surfaced and upset the team. Taking pains to be fair in dealing with everyone was, of course, critical. Fostering and maintaining mutual respect among team members was an important aspect of this situation, as well. Anna recognized that these issues were going to be central to her success in this project and acted accordingly.

The main thrust of this case is political power and cronyism. Here, of course, the form of cronyism is nepotism, but cronyism is the broader issue. Personal alliances develop in projects when people work together. Some are obvious, such as here where two principals in the case are married, and some are not so obvious. These kinds of alliances are important political issues that students should confront and ponder. Also, the question of what constitutes being 'indispensable' in an organization is raised. In the long term, no one is indispensable; in the short term, the issue is open to question. IS personnel, because of their technical expertise, often think of themselves as indispensable and this can lead, unfortunately, to serious political miscalculations.

3.3.2 Actual Outcome of this Minicase: What actually happened in this situation? Anna fired the husband and the wife quit. They returned to Australia, and the project team continued without them. As it turned out, the rest of the team had been upset and demoralized by the situation with the Australians. When they left, it was seen as a sign that new leadership had arrived and it was the dawn of a new day for the project. Anna's cultural sensitivity and subsequent leadership inspired teamwork and the successful completion of the project more quickly and at lower cost than had previously been anticipated. She had made the right decision.

In this minicase, students tend to have many opinions about how to proceed and there is usually a lively discussion. Students should begin to recognize that technical projects ultimately require the *good will* of technically capable personnel in order to achieve ultimate success. This is a minicase about the power of key technical staff to influence (or even, to a degree, control) managerial decisions. Students should appreciate that this is a fundamental conflict in every complex, technical systems project in which the technical

knowledge needed lies mostly with the lower-level staff and not with management.

4. CONCLUSION

4.1 Summary

The objective of this paper has been to provide two short real-world cases that can be used to supplement the teaching of a university information systems survey course. These minicases are short, focused presentations of difficult situations that challenge student thinking and force students to reconsider basic assumptions. Each minicase deals with a topic that is typically taught in IS courses at both the graduate and undergraduate levels. These cases may be used to stimulate class discussions, as homework assignments, or as examination questions. For each case, a discussion of how to use the case effectively in the classroom and a suggested solution are provided. Additionally, the actual outcomes of each case are included.

4.2 Toward the Future

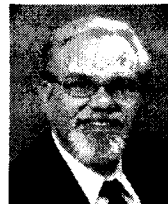
The use of realistic and challenging minicases as championed in this article stimulates student understanding and fosters an approach that involves students in active learning. The development and circulation of focused and challenging minicases among Information Systems Faculty would signal a significant improvement for information systems teaching and learning. If a vehicle could be found for sharing such short cases among faculty across the IS teaching profession, then the promise of this approach might be achieved. If IS faculty members could develop and document sets of well-focused and challenging minicases in their respective areas of specialization, the result would be a collection of current, insightful, and easy to use tools for stimulating classroom discussion and student interest in a range of current IS topics. These kinds of minicases could supplement and significantly enhance the curriculum for the typical graduate and undergraduate Information Systems course.

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