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# **AUGUSTINE STATE: THE INFORMATION TECHNOLOGY COMPONENT OF GOING ONLINE (A TEACHING CASE)**

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## **ABSTRACT**

Finding cases appropriate for teaching information technology courses is a persistent problem for instructors. This article is written as a teaching case and is intended for use by instructors in educating students about information technology. The case information is factual and deals with genuine information technology situations at a real-world educational institution. The case offers the opportunity to generate student discussion in the areas of corporate and IT governance, IT infrastructure, IT architecture, open source software, outsourcing and other topics.

## **Keywords**

Guides, instructions, length, conference publications

## **INTRODUCTION**

Dean McKensie Lynn (Mac) had been tasked with the job of taking Augustine State's College of Business Administration (CoBA) online with a substantial component of its course offerings. Further, the CoBA was to be the first on campus to offer a complement of courses completely online. Since CoBA represented nearly a third of the university's undergraduate enrollment and the MBA program accounted for nearly half the graduate enrollment, it seemed a natural place to commence a program that would eventually spread to the entire campus.

Mac was all for online education. He had seen it work well at his last school, but that institution had many more financial, personnel and technological resources with which to work than did Augustine State. Planning was crucial.

## **EDGEFIELD UNIVERSITY**

Prior to becoming Dean at Augustine State University, Mac had served at Edgefield University (EU) as Dean of the School of Business for five years. At EU he had gained experience with online education, but the technology and course design end of the online program had been facilitated primarily by the University's Center for Teaching Excellence (CTE).

Through the CTE, faculty members had access to guidance from an instructional design expert in the process of developing academic programs. At EU, each course that was transitioned from the classroom to the online environment was treated as a new course offering no matter how long the instructor had been teaching it. The CTE provided assurance that both new and transitioned courses were properly formatted to fit the capabilities of EU's online technology and the needs of online learners. The CTE also provided extensive assistance with the technology infrastructure and innovation. By resolving technological difficulties promptly and effectively, the technology support of the CTE created an environment in which faculty members were free to innovate with limited risk.

The CTE also addressed faculty concerns that are common to those new to online teaching, such as: instructional technology training, course design, teaching methods, evaluation of student learning, academic integrity in the online classroom, and support with numerous other concerns as needed. Information Technology Services (ITS) at Edgefield also went further with instructional technology support by offering classes in the current learning management system (LMS) and one-on-one assistance with setting up courses online and dealing with problems that subsequently arose. Students were directed to the ITS 24/7/365 hotline if they had any trouble with the technology, which kept this burden from falling to the instructor.

Instead of simply taped lectures and short video presentations posted to a Web site, online programs at Edgefield used email, discussion boards, chat rooms, threaded discussions, podcasts, and a host of other tools all coordinated through the portal of Blackboard's Learning Management System (LMS), which represented Edgefield's virtual classroom.

### **AUGUSTINE STATE**

The differences between Edgefield University and Augustine State are notable. Not only is Augustine State's staff exceptionally lean with many academic specialties being only one person deep, but by the time Mac arrived, the country was in the midst of a recession that constrained school budgets even more. Economic projections painted a dire picture for at least the next five years, with budget cuts and austerity measures already in place. Although senior administration see online offerings as a way of demonstrating the currency of the school's programs, its primary appeal at this time is as a revenue generator. Summer undergraduate programs always suffer because Augustine State's student body tends to use the summer as a time to participate in study abroad programs, internships, summer jobs, or to take classes from community colleges back home.

Augustine State University is located in the center of a metropolitan area with a population of nearly 300,000. The enrollment, particularly in Augustine State University's graduate program, reflects the diverse mix of people and places of origin the city attracts. The port authority, military, aircraft production and vibrant service industry make the city rather cosmopolitan and create a ready supply of graduate students for the school.

The undergraduate program could be described as small, public, and special-purpose. It serves a student body of approximately 2,200 while the graduate college enrolls approximately 1000 students. Undergraduate life at Augustine State is very structured and exclusively residential. Class attendance is mandatory. The school uses this policy as one of its points of pride in selling the program to parents, emphasizing the extra attention afforded students, close interaction between students and instructors, and enhanced learning opportunities. The graduate program, on the other hand, is similar to that of most conventional peer institutions. Although there are no full-time, day graduate programs, there is a robust evening program that caters to working adults completing their Master's degrees mostly part time during non-working hours. Thus, the college has two distinct sets of students/customers with virtually no overlap between the two programs.

Increasing Augustine State University's online outreach in its undergraduate programs would be challenging given the residential requirements and emphasis on classroom interactions. To avoid these obstacles, online programs would need to be limited at first to summer programs for undergraduates since over 65 percent of the institution's student body consists of out-of-state or international students and most of these students return home for the summer or otherwise leave the campus during the summer for work or travel opportunities. In addition, members of the student body who intend to gain credit hours during summer sessions have the typical concerns of ensuring that any classes taken at other schools would transfer back to the institution.

### **ONLINE EDUCATION BEST PRACTICES**

Mac read up on the best practices of schools that were some distance along the learning curve of online education. The literature regarding online delivery is fairly plentiful and has many suggestions about the best way to approach online programs. After reading dozens of articles on the topic, it became clear to Mac that the lessons from pioneers in online education fell into two broad categories: administrative issues and course delivery practices.

Mac took great interest in these findings because it would be primarily his job to make sure of the administrative commitment to the program and, in the pilot program, to provide his faculty with the requisite support. The provost had never specifically articulated the impetus for going online, but Mac felt certain it was a fusion of two factors: the desire to remain relevant and the need to increase revenues to the school as state funding diminished. Mac was assured of his faculty's willingness to buy in to the program, but he was less sure of the availability of resources to support and fund participation.

Mac could see that a number of challenges would face the school as it attempted to implement a pilot online instruction program. Delivering courses electronically would entail much more than simply getting faculty to bring their courses up in Blackboard, posting their materials and handling questions. As Mac began to peruse the literature about online course delivery, he began to see that the staff in Information Technology Services (ITS) at Augustine State would need to play a vital role in the success of the program.

### **THINKING ABOUT THE ONLINE ALTERNATIVES**

The review of the online best practices impressed upon Mac the need to be thorough. If CoBA's implementation of online teaching was to be a pilot for the university, he wanted it to serve as a model worth emulating. Yet, while Mac knew he was in a position to directly control most of the pilot program's decisions concerning administrative and course related topics, he

also recognized that the role of Information Technology Services (ITS) in the pilot program’s success involved many factors and decisions that he did not directly control.

Mac made a mental note to email Dan Martin, the Chief Information Officer (CIO) for Augustine State, to explain his concerns and set up a time for the two men to talk. Mac was hoping Dan could offer some insight and advice about the role of information technology (IT) in the online pilot program.

**DAN MARTIN**

Dan Martin, who had been at Augustine State for four years now, had been hired by the new President, William Davidson, only three months into the President’s first year. So, both Dan Martin and the President were relatively new additions to Augustine State. Upon arriving at Augustine State, the President had commented that one of his goals was to bring Augustine State’s IT into the 21st Century. To do that, he would need the right person at the helm of Augustine State’s Information Technology Services (ITS). After a thorough search, Dan Martin was hired as that “right person” and began his service as CIO at Augustine State.

In announcing the hiring of Dan Martin, the President had distributed a brief resume of Dan’s background and experience. As Mac pulled from his files the folder labeled ITS, the first item he saw as he opened the folder, was Dan’s resume. Mac remembered agreeing that Dan’s credentials were indeed rock-solid. Before coming to Augustine State, Dan had been CIO at another small university; although that university was still 3 to 4 times larger than Augustine State. As he continued to thumb through the folder, Mac found notes from some of Dan’s original observations concerning the existing IT situation at Augustine State. These observations, as shown in Table 1, were shared by Dan at one of the President’s strategic planning meetings soon after Dan arrived.

Primarily old, outdated infrastructure	<ul style="list-style-type: none"> <li>• 10 Mb hard-wired Ethernet</li> <li>• Limited, sporadic, non-enterprise, consumer-grade wireless b/g access points installed in an ad hoc, unplanned manner</li> <li>• Old, slow, out-dated servers (some no longer have parts available for maintenance)</li> <li>• A mix of hardware brands and software systems scattered about the campus</li> </ul>
Islands of computing	<ul style="list-style-type: none"> <li>• Each department or administrative area developed or purchased their own stand-alone IT systems that were not coordinated with or connected to any other systems on campus</li> <li>• Maintenance of these systems is by third-party, by ITS on a request only basis, or non-existent</li> </ul>
No coordinated IT architecture for hardware-software-databases-networks-personnel	<ul style="list-style-type: none"> <li>• IT decisions made independently by department or administrative area without regard for an overall high-level plan for coordination or best strategic use of IT</li> </ul>
No overall manager or director of Information Technology Services	<ul style="list-style-type: none"> <li>• Area department or administrative managers make independent decisions for only their areas</li> <li>• ITS staff is only called upon for technical support of the disparate systems when deemed necessary by the individual departments or administrative areas</li> <li>• ITS is relegated to a reactive, rather than proactive, service</li> </ul>

**Table 1. Notes from Dan Martin: Existing IT at Augustine State**

**NEW DIRECTIONS FOR INFORMATION TECHNOLOGY AT AUGUSTINE STATE UNIVERSITY**

Upon hiring Dan Martin, the President requested from him a review of all IT at Augustine State culminating in a report of “where Augustine State stood” along with recommendations concerning where Augustine State needed to be. This review resulted in a detailed IT plan and budget designed to follow President Davidson’s call to “move Augustine State into the 21st Century.” The needs in the IT strategic plan were incorporated into the President’s overall strategic plan for Augustine State.

The primary needs in the IT strategic plan included: (1) setting up a new IT governance model to fit within the President's new organizational structure for Augustine State; (2) preparing and implementing an immediate continuity and disaster plan for all IT; (3) preparing and implementing a plan to coordinate and integrate all aspects of IT at Augustine State; (4) preparing a plan to prioritize needs and update systems as soon as feasible. The President, Provost, Vice Presidents, and members of the Board of Directors approved the IT strategic plan; and, the process of moving IT at Augustine State to an integrated, campus-wide, enterprise system has begun.

Efforts have begun to upgrade the IT infrastructure to support the new integrated IT architecture and implement other key aspects of the IT plan. However, all of the President's institution-wide strategic planning—including the IT strategic plan—are now being impacted by the harsh economic environment and the severely reduced budgets. Mac needed to learn the status of the current IT plan and how this might affect his plans for the online pilot program.

#### **HOW INFORMATION TECHNOLOGY AT AUGUSTINE STATE UNIVERSITY MAY IMPACT ONLINE PLANS**

At their meeting, Dan gave Mac an overview of the progress Augustine State has made concerning the IT strategic plan. The major points of the overview included the following:

- Corporate and IT Governance are now set up so that Dan, as CIO, is included as a regular member of the President's top-level strategic planning team. Also, Dan now reports directly to the President with dotted-line reporting to the Provost and VP of Operations.
- Progress has been made on moving to a campus-wide enterprise system (ERP system) with initial steps taken to integrate some key systems. These early steps involve moving to the Banner software solution for key student systems, human resources, payroll, and financial accounting systems.
- Some modernization of hardware has taken place; however, most servers are slow, outdated equipment. Such old equipment even makes it difficult to find replacement parts. As a result of the server situation, decisions were made to outsource non-strategic systems, such as the student email system, which was outsourced to Google's Gmail system for organizations.
- The Internet connection for Augustine State has been upgraded by AT&T, due to AT&T's role as the third party responsible for managing and maintaining the offshoot from the T2 backbone that runs closest to Augustine State. In general, the upgrades have improved speed and reliability. However, because of Augustine State's slower infrastructure, the improvements are reflected on campus as merely marginal improvements.
- Ideally, Augustine State hopes to connect to the ultra high-speed Internet-2 backbone provided for major medical, educational, and research institutions in the state. But, for the foreseeable future, Augustine State is limited to its current Internet connection. In addition, the original, slow 10 Mbps Ethernet wiring that remains in all campus buildings is—in most cases—too expensive to replace with higher speed Gigabit wiring.

After Dan finished his overview of IT's status at Augustine State, he advised Mac that the current major concerns for the online pilot program would primarily involve two issues. The first issue involved deciding which Learning Management System (LMS) to use for the future. The second issue involved deciding whether to locate the LMS on campus using Augustine State servers and Augustine State staff to maintain the system; or, if the option is available, to locate the system at the LMS provider's facilities using its servers and its support personnel to maintain the system.

Mac followed Dan's advice and began to focus on the two LMS decisions: choosing which LMS to use for the future; and where to locate the LMS and server. Augustine State had been using the WebCT system; but, after WebCT was purchased by Blackboard, Augustine State—at the recommendation of Blackboard personnel—had converted to a hybrid system identified as Blackboard 8 CE. The faculty and staff were often frustrated with the hybrid product because it was neither WebCT nor Blackboard, but something in between. Thus, informal discussions among faculty and staff had long been underway concerning replacement of the hybrid system with a different product.

To help Mac with the evaluation and selection process, Dan agreed to involve several of his staff familiar with the current LMS and knowledgeable about operating and supporting the systems at Augustine State. Mac asked several faculty members to join the LMS evaluation committee and invited all interested CoBA faculty and staff to attend the committee's meetings. After much discussion, the LMS Evaluation Committee invited five LMS representatives to campus to present their products. A couple of the products were open-source products that are described as "free" because there is no direct cost for the LMS software. However, the representatives for the open-source products explained that they do charge for training support; and that there is essentially no technical support available. After a number of meetings, much discussion, and extensive evaluation, the committee made its selection of LMS software and also made its choice concerning where the LMS should be

located. All that remained was to report the committee's actions to the Dean for his final approval or rejection of the recommendations.

### **THE DECISION**

As Mac looked up, the chairperson of the LMS evaluation committee, Sue Emerson, entered his office and offered the Dean this greeting, "Well Mac, we've made our choices." Mac invited Sue to sit down; and with anticipation, Mac listened as she began explaining the committee's rationale. As Mac listened to Sue, it became clear that there had been a good bit of debate about whether to choose a traditional LMS or go with an open-source product. However, once that decision had been made, it seemed to Mac that the committee required much less debate in deciding the best location for housing the Learning Management System and server.

After sharing the committee's recommendations and answering Mac's questions, Sue stood to leave Mac's office. Mac also stood and offered his thanks for the committee's recommendations and hard work. The office fell quiet after Sue's departure. Mac welcomed the silence as a rush of thoughts filled his mind. He felt a renewed pressure to get back to the Provost with a plan that would allow the school to be ready for online instruction in the summer; and, Mac knew the LMS situation would be a key component in delivering online courses at Augustine State. As Mac considered the committee's recommendations, his assistant stopped in his office doorway and announced, "The Provost is on the phone for you." Looking surprised, she added, "He says he's eager to hear your decision about the Learning Management System." Mac acknowledged the news with a surprised look of his own; then, slowly nodded as he turned in his chair and reached for the phone. It was time to announce his decision.

### **QUESTIONS:**

**What would be the best choice of Learning Management System for Augustine State? Explain your decision and offer support from the case and other resources.**

**Where would it be best for Augustine State to locate the Learning Management System and server? Explain and offer support for your decision based on the case?**

**How has the modern environment of rapidly changing technology influenced Learning Management Systems in general; and, open source Learning Management Systems in particular? Can you cite any examples to support your rationale?**

**Based on the limited information described in the case, do you think the Corporate and IT Governance at Augustine State University are appropriate? Why or why not?**

**Do you think that Augustine State's decision to outsource student email to Google was a good decision? Why or why not?**