Claire Senot: Leveraging the Power of Data

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When Claire Senot was growing up, her father encouraged her to learn about numbers.

He was an electrical engineer who worked on electricity networks in Iraq, Saudi Arabia, Germany and Russia, as well as his native France. His profession used mathematical tools to solve physical problems.

“He was very interested in quantitative analysis,” she recalls, “and so he always pushed me to be quantitatively focused, on things like math and physics.”

Today, she applies data analytics to a different set of problems: those of running a business. As the Morton A. Aldrich Professor in business and associate professor of management science at Tulane University’s Freeman School of Business, Senot incorporates a strong analytics focus throughout its Master of Business Administration degree programs.

“In today’s business world, everyone needs to be fluent with using data,” Senot says. “You need data literacy and analytic skills across all disciplines, whether you work in accounting, in finance, in operations management or in marketing.”

Process and Practice

Perhaps because Senot moved so much during her childhood, she became fascinated by processes: the chains of actions or steps taken to reach a goal, whether it’s a new product or a healthcare outcome. That interest led her into the world of business.

“I thought business was interesting from the standpoint of understanding more how things worked,” she says.

After graduating from Audencia Business School in France, Senot got hands-on experience with process management at an Australian company which imported luxury brands from Europe. She coordinated marketing logistics, making sure that shipments arrived on time for sales events.

From the experience, she says, “I learned that there’s always room for improvement and that quantitative skills do help.”

Seeking to improve her own skills, she went to Ohio State University, where she got an MBA and a Green Belt Certification in Six Sigma, a methodology for systematically enhancing quality and efficiency in processes while reducing defects and errors.

She put those skills to work at Sears Holdings, which was operating both Sears and Kmart stores. She automated much of its inventory system, while she also taught programming to co-workers. In the process, she found herself attracted to teaching.

“I enjoy the moments when I see a student understand something that they didn't understand before,” she says. “They get enthusiastic about the idea, and they see how it applies to their everyday life.”

Improving Healthcare Processes

With an eye on teaching, Senot returned to Ohio State to get a doctorate in operations management: the design and execution of processes to produce goods and services more efficiently. There, she learned that operations management meant more than making a better smartphone. It could mean the difference between life and death.

In her dissertation, she applied operations management principles to healthcare. Working with the Cleveland Clinic and other providers, she examined what they could do to reduce readmissions, the rates of patients returning to hospitals after they had been discharged.

Analyzing data from the Centers for Medicare and Medicaid on nearly 3,000 hospitals, she found that communication was key, both before and after discharge. Facilities which prioritized communication reduced readmission rates an average of 5%

“It’s making sure people are taking their medicines, making sure they understand their treatment plan, making sure they have a voice in their treatment plan,” Senot says. “It’s making sure the patient feels like they are a partner in their care.”

Doing More with Data

After getting her doctorate, in 2014, Senot joined Tulane and began teaching at the Freeman School. She was immediately taken by both the school and the city, which reminded her of home.

“It's more like a European city in the way that you can walk and bike everywhere,” she says. She’s also gotten into the city’s Mardi Gras culture, designing headdresses and riding in the Krewe of Tucks parade.

Academically, she teaches several courses for undergraduate and graduate business students, such as advanced spreadsheet modeling and operations and supply chain management.

Whatever the topic, she emphasizes analyzing data to improve processes. These days, she says, “There is a lot more data available, but unfortunately, there is not as much skill to be able to analyze this data.”

Programs in her area of Management Science include an MBA with a concentration in business analytics, a Master of Business Analytics, and a new certificate in business analytics and artificial intelligence (AI).

“We're focusing on what companies want and giving students skills they’ll be able to use in their jobs,” she says. “We did an extensive market survey of employers and managers, and this is one of the number one skills that companies are looking for.”

In the classroom, Senot stresses the practical uses of analytics. For inventory management, students evaluate the trade-offs at Whole Foods, when it loaded products straight from trucks onto store shelves. The process reduced the cost of warehouse storage but led to more empty shelves.

She’ll also have them simulate waiting for an ambulance after an accident. They explore what factors might increase or decrease their wait times, as well as important concepts such as how to measure wait times.

Such exercises help students develop critical thinking skills, which she calls critical to both data analytics and AI.

“Anything that can be automated is not going to need you anymore,” she says. “Your value is really in critical thinking, in understanding how it works and not letting it be a kind of black box.”

“You want to use AI to assist you in making things better but not to let AI replace your thinking. I think that, ultimately, AI is going to enhance the value of critical thinking.”

Explore a Career in Business and Analytics

With the explosion of big data, running any business, large or small, requires understanding how to analyze it and to put it to practical use. A degree program like the Master of Business Administration at Tulane University can equip students with the nuts and bolts of analytics and critical thinking abilities to use data strategically.

The program offers several options in analytics and related fields like AI, as well as options for a Full-Time MBA, Online MBA and night and weekend studies. Learn more about how such a degree can prepare you for a career as a business leader of the future.