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NORTHEASTERN UNIVERSITY "GAMIFIES" SUPPLY CHAIN

When a program is already exception, what does it take to take it to the next level?

For many, this seems like a "nice to have" problem. After all, if the department, program, or course you're teaching is already successful, is there really a burning need to improve it? This was the challenge, though, that Northeastern University and the Supply Chain and Information Management department faced when considering the next step to take in their Introduction to Supply Chain and Operations course. Celebrating their 50th year as one of the premier supply chain and logistics programs in the country as well as the leader in cooperative education (Co-op) Northeastern University's D'Amore-McKim School of Business works with more than 600 employers worldwide to provide rich, diverse job opportunities to students - boasting some of the highest job placement rates in the country.

Which naturally begs the question...so, what's the problem?

One of the hardest things to do in any college classroom is to find new and innovative ways for students to practice and apply what they're learning. It's an enormous burden on faculty to create new and interesting practice situations, activities, labs, group work, projects, etc. that offer real-world examples for students to actually immerse themselves in. But having application-based activities is critical since it pushes students towards a higher-level of learning; allowing them to actually think critically and apply their knowledge beyond the classroom.

Especially in something as dynamic and ever changing as supply chain management, you can imagine how critical it is to get students up and running for real-world situations and decisions quickly.

So, while the curriculum and teaching remained top-notch at Northeastern throughout the years, Professor Michael Power and his colleagues within the Supply Chain and Information Management Group remained open and interested to new ideas and innovation - particularly the kind that would help their students transition from the classrooms to Co-op internships, and to eventually full-time jobs.

Enter in game-based simulations.

Looking for new opportunities to let students experiment and explore the material, without fundamentally altering the way the course was taught, was a challenge. Too often technology can over-complicate or take over a classroom. The program at Northeastern was already high-caliber, the faculty just wanted a way to easily facilitate interactive participation and critical thinking so that their students would be even better prepared for their Co-op's internship placements.

After exploring a number of options, Power and his colleagues eventually partnered with McGraw-Hill and Muzzy Lane to develop a complementary, customized game-based learning tool, Practice Operations, affectionately called *The Game*.

The result was the creation of a system where students, or players, assume the role of an operations manager for a clothing manufacturing company. As part of *The Game*, players place bids for contracts, manage physical and human resources, order raw materials, oversee the clothing construction process, and ship products to customers. *The Game* is segmented into focused modules and each module deals with an issue that can commonly arise in the production process in the real world. These issues range from capacity, supply chain, and labor management to limited production timelines, order fulfillment, customer satisfaction, and quality control. The object is to problem solve in order to maintain customer satisfaction and contribute to the success of the hypothetical company.

THROUGH TEAMWORK, STUDENTS CAN LEARN ABOUT WORKPLACE COLLABORATION AND TROUBLESHOOT ISSUES IN A SIMULATED CORPORATE ENVIRONMENT.

Power notes that “prior to Practice Operations [and the creation of *The Game*], we did everything we could to create a meaningful connection with students about supply chain operations. The curriculum modules and simulation allow us to take Introduction to Supply Chain Operations to a higher level of engagement and awareness of the supply chain profession.”

The Game is now introduced during the first class of each new term and students continue to play throughout the rest of the course. To make the situations, outcomes and consequences feel more realistic, Professor Power has his students complete the modules in groups of four. Through teamwork, students can learn about workplace collaboration and troubleshoot issues in a simulated corporate environment. Professor Power often pressure tests and challenges these groups, but most often the teams emerge from the course as a tight-knit, cohesive unit completely focused on winning *The Game* together.

To demonstrate their learnings in both the classroom and the virtual world, each team gives a final presentation during one of the last two class sessions of the semester. Students are encouraged to dress in business attire and showcase their key learnings from the course as a final preparation for the reality of the corporate world.

According to Power, “Playing Practice Operations was a success from the first semester we introduced *The Game*. It helps students visualize real life within supply chain operations. They are positively engaged with the updated curriculum, graphics and technology. The simulation makes learning supply chain [management] fun, and gives students a sense of real-world business experience.”

By elevating the curriculum with immersive game-based adaptive learning programs that simulate the working world, Professor Power is making his class fun and exciting while also preparing students for successful careers by bridging the gap between classroom learning and workplace expectations.

What we hear consistently from students is that the simulation gives them confidence that they are prepared in class for a job," Power said.

Game-Changing Results

Power and his faculty team observed several positive results when implementing "The Game" using Practice Operations.

- The simulated work experience helps students tangibly understand supply chain operations in a way that was not possible prior to the tool's implementation.
- The competitive natures of both the digital-based game and the real-life competition between teams in the classroom have helped push students to learn more effectively.
- Students know that, by experimenting with different decisions, strategies, and tactics, they'll have a better chance of building a successful business model.
- The ability to succeed or fail within a real-world business simulation has helped students explore supply chain operation and management as a business and a potential career path.
- Best of all, according to Power, "student feedback on the tool has been overwhelmingly positive. They feel very prepared for their cooperative internships and a career in supply chain management."

Gone are the days when games were designed strictly for children or leisure. In fact, game-based learning is helping to revolutionize higher education simulating real-world relevancy for students. Modernizing college curriculum through the use of games is now seen as a necessity to help keep a generation of tech savvy students engaged and excited about the learning process.

While topics and materials can vary from discipline to discipline and from game to game, the skill development involved often centers on high-level concepts like strategic and critical thinking, problem solving, cause and effect analysis, self-directivity, and teamwork. Since these games and activities aren't like traditional high-stakes exams, the approach provides students with a safe environment to experience, learn, and, most importantly, fail without any negative impact on their grades. It is this freedom to fail, without failing a class, that makes game-based learning simulations so impactful.

About McGraw Hill Education and Practice Operations

McGraw-Hill Education aims to deliver personalized learning experiences that help students, parents, educators, and professionals get positive results in the classroom. The company's product solutions give educators the flexibility to teach their course their way and, at the same time, provide students with affordable and engaging products designed to help them meet learning outcomes.

The company's investment in bringing game-based learning into higher education is another example of how technology is changing the educational landscape. Programs like Practice Operations are transforming and improving learning experiences for students and helping produce better educational outcomes.

LEARN MORE

Practice Operations is accessible online through McGraw-Hill Connect.

SPOTLIGHT

MCGRAW-HILL PLAYS ITS HAND IN GAME-BASED LEARNING

McGraw-Hill Education is a learning science company with a long history of developing and deploying game-based digital and adaptive learning solutions. For decades, McGraw-Hill has partnered closely with college faculty and subject matter experts to build course materials that align with a classroom's curriculum and the wider department's learning objectives. Seeing the educational potential of game-based learning simulations, McGraw-Hill decided to look for an opportunity to partner with a software company that was passionate about improving student learning. And they found one in Muzzy Lane.

Today, McGraw-Hill's subject matter experts collaborate with Muzzy Lane's instructional designers to help customers build rich, interactive student experiences across numerous disciplines and courses. Using complex graphics, world-building stories and examples, 3-D simulations, and other familiar gaming elements, these scenarios provide opportunities for students to apply their learning in experiential situations that mimic real life. These programs are embedded alongside the other digital course materials available in McGraw-Hill's digital learning platform, Connect, a platform that provides the added benefit of gradebook integration and easy sign-in access for students. According to Muzzy Lane President and Chief Executive Officer David McCool, "Game-based learning can be both fun and create an improvement on academic performance. Game-based learning makes it real."

"MCGRAW-HILL SAW THE VALUE OF SIMULATIONS EARLY ON AND WAS WILLING TO INVEST IN BUILDING THAT CAPABILITY INTO ITS PRODUCTS. IT'S BEEN A GREAT WORKING RELATIONSHIP OVER THE YEARS AND THEIR COMMITMENT TO THE CUSTOMER DOVETAILS WELL WITH OUR OWN. AS THE TRANSITION TO DIGITAL HAS ACCELERATED IN EDUCATION, MCGRAW HILL HAS COMMITTED TO BUILDING NEXT GENERATION COURSEWARE PRODUCTS, WITH SIMULATIONS AS A KEY COMPONENT."

– David McCool, President and Chief Executive Officer, Muzzy Lane

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- Government in Action
- Medical Assisting