

Why All Business Schools Should Teach Foresight

Perspectives from More Than a Decade at the University of Notre Dame

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Since the 2009-2010 academic year, the Mendoza College of Business (Mendoza) at the University of Notre Dame has required all undergraduate business students to take a course entitled *Foresight in Business and Society* (Foresight). This course is built around student teams conducting deep dive futures research projects in areas rich with emerging change and presents one of the more rigorous academic challenges our students face.

As many educators and practitioners in the futures studies space well understand, the practice of foresight is too often misunderstood and dismissed by decision makers who prefer what they consider more rigorous areas of study and decision support. This dynamic becomes evident in the foresight professional practice as groups such as the Association of Professional Futurists (APF) continue to wrestle with issues such as professionalization and credentialing. These challenges are amplified when considering the pedagogical design and implementation of a foresight course in a traditional academic setting such as the University of Notre Dame where issues such as assurance of learning and accreditation are primary considerations.

The Foresight curriculum has overcome these challenges and extended its reach by demonstration of career relevance, engagement with alumni project mentors, and proactive advocacy to create and maintain support from college leadership. In this article, the Mendoza Foresight faculty will share perspectives on the value of this learning experience and advocate in favor of all business schools teaching foresight.

Background

Foresight began at Mendoza in 2005, when our alumni Business Advisory Council (BAC) envisioned having an annual future-oriented speaker series that ultimately was called *Ten Years Hence*. This decision was the result of conversations with the BAC about the gap between the learning experiences provided to undergrad students and the skills future business leaders will need in an increasingly complex and uncertain business environment. The need to anticipate and prepare for unexpected and disruptive change were viewed as the most essential skills needed to fill that gap.

The inaugural speaker series included experts and executives from business, academia and NGOs. As the popularity of *Ten Years Hence* grew, Mendoza's academic leaders, again in consultation with the BAC, proposed the idea of deepening the learning experience by creating a full-semester deep-dive Foresight course. The driving force behind this vision was former Dean Carolyn Woo.

She appreciated the differentiating nature of this course, and spearheaded the effort to make it a required course for all undergraduate business majors.

Creation of the first iteration of the undergrad course was led by Professor Tom Frecka, who had the benefit of perspective generously shared by foresight education leaders such as Jim Dator from the University of Hawai'i, Peter Bishop from the University of Houston, Bill Cockayne from Stanford University, and Bob Johansen from the Institute for the Future. Many thanks to those upon whose shoulders we are privileged to stand. In 2008 the course was piloted and in the fall semester of 2009, Foresight was scaled to serve the full junior class (numbering about 650 students).

To date, Foresight has been taught to over 6,000 undergrads and has been extended to Mendoza's MBA and Executive MBA graduate programs. In addition, Mendoza has continued its annual *Ten Years Hence* lecture series and extended our program to include conferences and other events to make it a recognized aspect of the college.

Essentials of the Notre Dame Foresight Curriculum

The challenge of creating and enhancing the Foresight programming has revealed useful insights into the most essential aspects of the student learning experience. The design and delivery of the course is unique in many ways, and the Mendoza Foresight experience has been shaped by the following **five design principles**.

1. Great Business Schools Exist to Develop Great Leaders

The design of the pedagogical architecture of the Foresight course was first and foremost influenced by the understanding that the role of business schools is above all to groom the leaders of tomorrow. Hallmarks of leadership include decisiveness despite uncertainty, empathy and trust, and visionary communication. While behavioral and interpersonal elements of management are well established in business school curriculum, cultivation of forward-thinking leadership capabilities is not.

Students (future leaders) are well-served by exposure to systematic foresight pedagogy to cultivate these essential anticipatory skills. Thus, at its core, our Foresight program challenges students to THINK in different ways – to develop a future-oriented mindset as much as a skillset. Tom Mendoza, namesake of the Mendoza College and early influencer of the shape of our Foresight program, suggests that his leadership of internet innovator NetApp relies on “thinking in ten-year increments”. We offer this perspective early on to our students to reinforce the relevance of anticipation as a key leadership success factor, helping position our students to, as Mr. Mendoza says, “do extraordinary things in their lives”.

Our students commonly reflect on how the course enhanced their systems thinking, critical thinking, and creative thinking capacities. Reflecting on her career experience, former student and Foresight alum Brianna Bocker indicates, “I was able to apply the

teachings of Foresight to help my company's executives not only base strategies off historical data, but also to look forward to determine what other factors may come into play." And former student and data scientist consultant JC Sullivan notes that quantitative analysis alone was not enough to build a military readiness decision support tool, "I applied strategies from my Foresight course to our model development efforts, including future scenario building and complex causal diagramming."

2. Business has an Under-Developed Capacity to Confront Ambiguous Questions

Historically, much of the prototypical business school curriculum has been geared towards optimization, problem solving, and financial analysis challenges – "definitive questions" for which a correct answer can be developed. Companies pay handsomely for graduates with these skills.

Farnam Street's Shane Parrish recently said, "You get paid linearly for analyzing and solving problems. You get paid non-linearly for spotting and seizing opportunities" (Parrish, 2018). Unfortunately, the short-term world of business too often prioritizes optimization and execution; non-linear opportunities lie in the ambiguous space beyond this more incremental comfort zone. The Mendoza curriculum seeks to help create a bridge between these linear and non-linear worlds by using Foresight as a springboard from traditional course content into areas such as design thinking, entrepreneurship, and strategic management.

Foresight provides a platform upon which students can gain experience in asking and answering ambiguous questions. These are the types of questions that are more difficult to define, more challenging to explore, and for which there is usually no correct answer. Questions like, "What's next?". Tyler Hudson-Crimi, a former student and founder of a boutique digital marketing agency comments, "Notre Dame's Foresight program showed me the value of continually spotting and understanding shifts on the horizon, skills I have used to help clients imagine disruptive uses for emerging digital platforms and act early to position them to seize these opportunities before others even see them."

The Mendoza course pushes students directly into this ambiguity. The framing process places as much or more emphasis on the "asking" component as it does on the "answering". Our course design brings intentionality into the framing of good anticipatory questions which serve as the starting point for the deep-dive futures research projects required in the course.

3. Experiential Learning Creates Understanding

Foresight instincts are best developed via active engagement with industry experts and expert engagement is best driven via a deep dive project. A project-centric approach takes students on an exploratory journey towards understanding emerging opportunities beyond the traditional strategic time horizon. The learning experience is framed as a semester-long immersion that pushes students beyond familiar library and web searches.

Students are expected to engage directly with subject matter experts to frame their questions, gain a broad perspective, and gather evidence on emergent change and uncertain future possibilities. A loyal and passionate alumni network can serve a vital role as experts and mentors with student teams. Notre Dame alumni serve as project mentors to create a learning context that blends the often bright line between the classroom and the real world. Since 2010, project teams have worked with corporate mentors from such organizations as IBM, Boeing, GE, Fiat-Chrysler, McDonalds, Corning, Interface Inc., Institute for the Future, Rocky Mountain Institute, USAID, and others.

Feedback over the years indicates that this expert-informed context amplifies the learning experience. Bill Chamberlin, long time project mentor and corporate HorizonWatcher at IBM reflects, “the team project puts a strong emphasis on producing client-ready work. Students get a chance to interview ‘real world’ leaders in specific domains to explore current trends and potential futures. This helps the student teams test their hypotheses and synthesize their findings while at the same time learning critical skills needed in the corporate environment.” Former student Matt Matigian offers, the Mendoza Foresight experience “gives a close to real-world experience that I’ve found to be very helpful in my early career.”

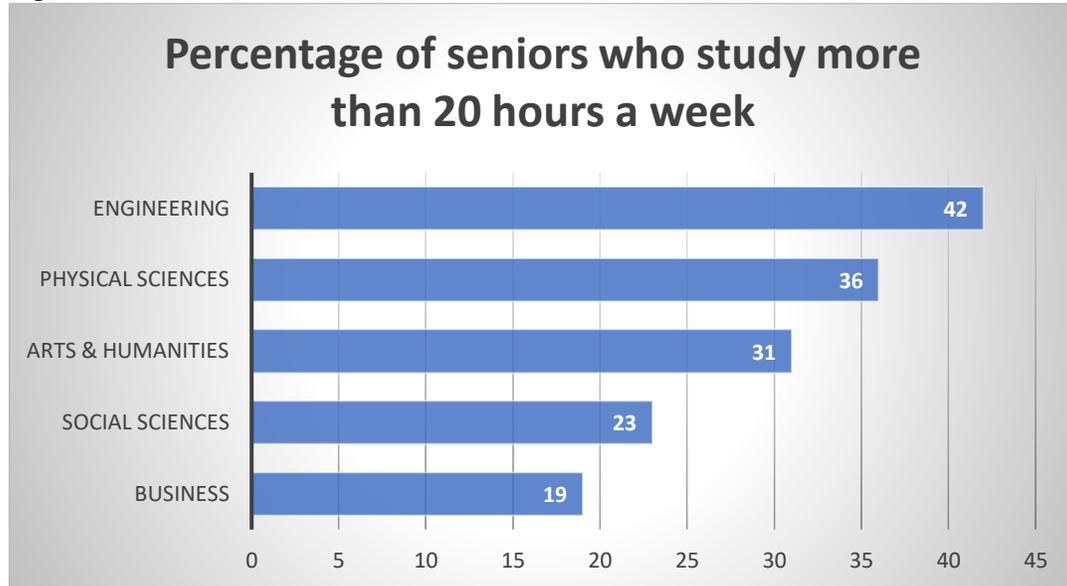
Another significant student benefit from this experiential learning context is how it can enhance their success in securing professional positions early in their career. We often hear feedback from students and recruiters regarding how the Foresight project provided a useful context for interview questions about approaching unstructured problems or working in team settings under pressure – aspects that align directly with the design of the Foresight experience. Former student Valerie Woulfe recalls, “talking about my Foresight project did help me when I was going through the interview process.”

Sometimes the experiential nature of the projects can also yield unexpected outcomes. Alumnus Katherine Joyce remembers a former classmate as they explored the future of cryptocurrencies. “One of the members of the group had purchased a small portion of a Bitcoin in order to demonstrate the platform to the class. This was in early 2015, when one Bitcoin cost roughly \$330. Today, Bitcoin is worth exponentially more. I still wonder how much money he made!”

4. Rigorous Research Stretches Exploratory Competencies

Research and time commitment outside of class are often reflective of academic rigor and student engagement, both desirable preparatory elements in a world of self-directed project work. However evidence shows business students spend less time studying outside of class than virtually any other major on campus (Adler, 2016; see Figure 1). Evidence which sometimes causes colleagues from across campus to look askance at business programs. As a deep-dive futures research experience, the course challenges students to conduct rigorous inquiry and research. And, as a result, this course is an opportunity to redress this engagement deficit.

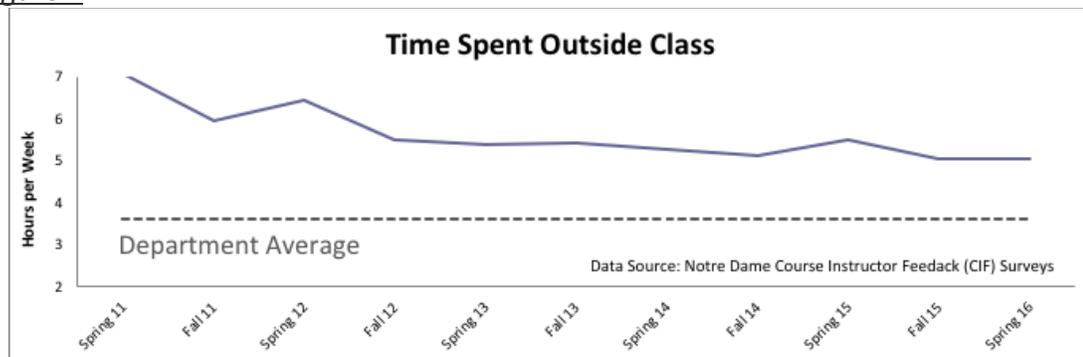
Figure 1



Source: National Survey of Student Engagement; as referenced in Lipka, Chronicle of Higher Education

Foresight regularly scores in the highest decile for time required outside of class (see Figure 2), yet still scores highly on student satisfaction of the course – a delicate balancing act to be sure. Reflecting on the rigorous nature of the course and project, former student Patricia Walsh shares, the Foresight course “was valuable in providing a structured curriculum and formalizing a thought process and approach to thinking about trends and forecasting. All business schools should include foresight in required curriculum to ensure that every student receives an education in futures thinking.”

Figure 2



There is an understandable tendency to overload the course, and experience confirms that instructors must always be aware of the research intensity and workload of the team projects in managing the course design. Over time, we have developed an appreciation for the words of French writer Antoine de Saint-Exupery "Perfection is achieved not when there is nothing more to add, but when there is nothing left to take away" (de Saint-Exupery, 1939).

Balancing academic rigor with a practical business lens is the intended sweet spot of this course. It took a number of semesters to find this balance, and its pursuit is never done. But once in balance, the student outcomes can be powerful. Another alum perspective from Mary Schlegel reinforces this point. "Foresight heightened my awareness of the complex relationships within a business and gave me insight into how to balance these. These new skills buoyed my confidence and forced me to ask more perceptive questions. With the learnings from the course, I was able to help prepare my first startup for the future (making it more scalable, establishing paths to leadership, etc.)"

5. Anticipatory Leadership Should Serve as a Force for Good

Business leaders and educators recognize the negative perceptions business can face in today's society and business must strive to create beneficial outcomes that can change these perceptions. Foresight is unique in its capacity to position business as a force for good – a consideration that has been central to the design of the Mendoza Foresight program. Our exploratory research process serves as a lens through which students can identify emerging societal needs and imagine innovative solutions that can serve the greater good while also generating jobs and economic prosperity.

We set an expectation that students scan the horizon through lenses provided by the UN Sustainable Development Goals and the Millennium Project's 15 Global Challenges. In these challenges can be found innovation opportunities to improve literacy, health and wellness, environmental impairment, water quality and a host of other concerns – while earning a return on investment. Understandably an examination of the moral and ethical implications of business's responses to change is woven into the Mendoza Foresight experience.

These five design principles have driven the positioning of Mendoza's Foresight program and have been behind its endurance and expansion over the past decade. That being said, the program has faced inevitable hurdles and challenges. Recognizing and addressing these challenges has helped the team of instructors maintain momentum and continue our forward progress.

Challenges and Pitfalls

- **Not Every Student has an Appetite for Rigorous Research**

All Mendoza undergraduate students must complete Foresight during their junior or senior year. This presents a challenge to deliver a learning experience that meets a diverse set of needs, expectations, and priorities.

Feedback from corporate recruiters and our alumni network continues to reinforce the underlying assumption that exposure to foresight creates better and more prepared new-hires – a value that many students do not initially recognize. Sharing this corporate perspective regularly in the classroom is a key strategy to shaping student perspectives. Our course content draws in relevant examples from business in the form of recently published foresight forecasts, timely news articles, and guest speakers to continuously reinforce the valuable role that foresight can play in strategic leadership. The more students hear of the value of foresight from people outside of academia, the more likely they will internalize how this experience can contribute to their success.

Experience shows that those students who would prefer not to take Foresight tend to be the most vocal to college leadership. So, another essential strategy is to be sure that deans and department chairs understand this phenomenon. Most educators and practitioners in the foresight space recognize this tendency to misunderstand and pushback against the field. This dynamic persists and staying out in front of it is a necessary aspect of managing a successful business foresight program.

- **Finding and Retaining Foresight Faculty is an Ongoing Challenge**

The pedagogical design of this project-centric course requires a significant time commitment by the faculty and can create a challenge to recruit and keep quality instructors. The broad and diverse set of project topics requires that faculty stay abreast of fast moving change across a wide spectrum of STEEP categories. Connecting students with alumni experts and providing feedback on their progress can also be a daunting and time-consuming challenge.

The Mendoza program seats as many as 700 undergraduate and 150 graduate students per academic year, so there is a need for significant teaching bandwidth in the program. Our approach has been to rely on practitioner and teaching faculty, rather than research faculty – enabling a more focused approach to supporting successful student experiences. Additionally, specific attention has been placed on building a core of potential new foresight professors by developing adjunct instructors to teach Foresight to ensure adequate depth as the program grows.

In spite of these challenges, the perspective gained from our experience over the past decade suggests that foresight should be considered an essential element of business school curricula on a much wider scale. From our decade of perspective on the front lines of business foresight education, the Mendoza Foresight faculty offer the following recommendations:

- **Treat Foresight as a Platform, Not as a Course**

Foresight at Mendoza began due to the recognized need to better prepare future leaders for an uncertain future. We began with a modest initiative and put it on a growth path that continues today. Establishment of Foresight at the undergraduate level, and effective demonstration of its relevance and legitimacy has led to its adoption in the MBA and Executive MBA programs.

The Ten Years Hence speaker series continues to provide a venue for Mendoza to share foresight insights and perspectives from executives, practitioners, NGOs, and others to reinforce the school's commitment to this aspect of leadership. Hosting conferences and events to share ideas and engage in dialogue across the range of stakeholders that includes students, faculty, domain experts and policy makers again has built momentum towards action and creates durable traction for the program.

Another key learning from our experiences is the need to engage with the University Development organization to secure funding for this type of extracurricular programming. Our experience shows that there tends to be solid initial interest from potential donors in the general topic of foresight, but consistent with the underlying theme of this article, building understanding of the specifics for how funding would be used is always a challenge. Over time, the Foresight program has secured a multi-million endowment for foresight programming, including funding for an endowed faculty seat.

- **Proactively Build Integration Across the College**

Foresight by its very nature should have an overlap with a wide spectrum of business subjects including Innovation, Design Thinking, Investment Strategy, Market Research, Business Analytics, Strategic Management, and others. Creating a cohesive understanding of these potential overlaps enables business schools to act as a force multiplier. Similar to the need in business to integrate long term foresight with near term strategy and operations, a well-integrated approach can work to capitalize on the overlap, rather than becoming entangled in it.

Such an approach will enable foresight faculty to shine a light on how the foresight learning experience can drive success in other business disciplines and can help faculty from other disciplines challenge students to call on their anticipatory tool box to bring fresh perspective to their work in all subjects.

At Mendoza, our integration efforts have yielded some interesting results in areas including entrepreneurship, ethics, and design thinking. For example, one undergraduate foresight project exploring the future of microfinance was carried forward into the entrepreneurship capstone course and ultimately won first place in our annual McCloskey Business Plan Competition. This type of high visibility synergy helps to drive perceived value with students, faculty, and the dean's office.

- **Keep Selling Foresight**

As is recognized by this audience, foresight is not a standardized, well-accepted element of traditional U.S. business curriculum. As such, its implementation was not without challenges and setbacks. Initial student dissatisfaction was high and there was inopportune faculty turnover. Much of this initial student pushback stemmed from a course design that asked too much of students in terms of reading, workload and time commitment. Our early outreach for guidance on course design resulted in an initial design that proved to be too all-inclusive.

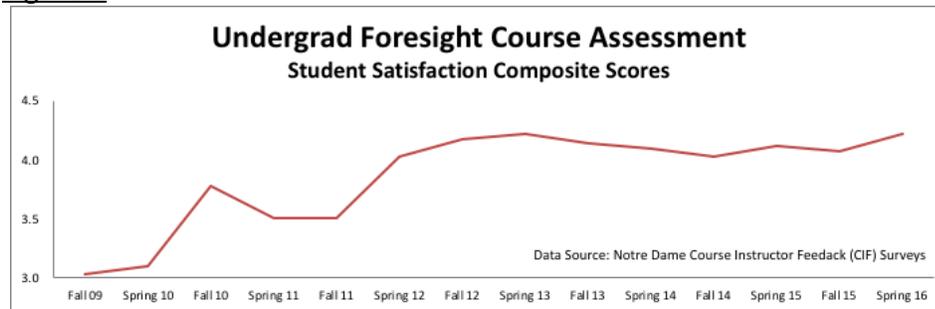
Despite initial setbacks, senior administration and BAC support remained strong and there was critical support from a respected faculty member in a traditional business discipline. Foresight faculty experimented, iterated, and ultimately created a very favorable perception of the course. Key revisions included:

- Pared down the required reading list focused on Futures pedagogy and tools; less so on detailed examination of foresight reports
- Scheduled workshop days in active learning spaces for team project work and visualization activities
- Redesigned course roadmap that included major milestones and deliverables to help manage the inherent ambiguity in foresight work and avoid end of semester crises. Of course, incumbent with these milestones were increased faculty obligation for grading and coaching.

Also, expect that some students may not fully appreciate the value of this new skillset and mindset until they gain more practical experience. Some of the pushback on the value of Foresight comes from the perspective that much of this material is self-evident and is not worthy of so much emphasis. Former student Brianna Bocker shares, "I'll admit that when I was a student, I didn't realize the full value of forward-looking thinking when it comes to business strategy. It didn't seem directly applicable to my career goals. However, now that I am in the workforce, I have come to find that forward-looking thinking is rare to find." Foresight program leaders should embrace this disconnect and share this type of alumni perspective to build better awareness of the power of this type of thinking in students' future careers.

At the end of each academic year, the Foresight faculty create an annual report of progress and highlights that is presented to the dean each summer. Metrics such as student satisfaction, intellectual challenge, and time spent outside of class are rigorously assessed and plans for enhancement are created to strengthen the program design and outcomes. Figure 3 shows student assessment of course quality and relevance over time.

Figure 3



- **As the old adage goes, *physician heal thyself***

Business educators should not only teach foresight but practice it as well. While things may be well for business educators now, complacency is not warranted. Challenges abound, corporate universities and targeted for-profit education units are expanding, emerging technologies and MOOCs (massively open online courses) may have material impact, and notable entrepreneurs are questioning the value and wisdom of college (Kolo et al., 2013; Thiel, 2014). With greater emphasis on cultivating critical thinking skills (Huber and Kuncel, 2016) business school curricula need to evolve. While there is a role for lecturers as the all-knowing repositories of knowledge, there is a rapidly emerging need for educators as guides and coaches for students' own exploratory journey. In a world of multifaceted, adaptive challenges where employees may have once looked to the boss for solutions, they now are expected to be co-producers in adaptive solutions (Heifetz, Grashow, and Linsky, 2009). So too with education, as students co-create aspects of their own learning and discovery. Project-based foresight aligns with these needs and cultivates skills in structuring ambiguous questions and deeper mindfulness for anticipating emerging possibilities.

In this regard, the Mendoza faculty continues to experiment with teaching concepts such as flipped classroom experiences, usage of non-traditional learning spaces, and other sorts of experiential learning options. Balancing this bias for experimentation with the need to offer a standardized core offering across the student body needs to be a priority. This requires close coordination across the faculty team.

Closing Thoughts: Should All Business Schools Teach Foresight?

With a decade's worth of experience and perspective, and informed by over 6,000 student data points, it is the conclusion of the Mendoza Foresight faculty that foresight can be a valuable and career enhancing experience for students. Every business school should consider this space—provided they intend to do it well.

Former student and current corporate foresight practitioner Rob Morgan remarks, “Business schools should only offer foresight if they are willing to invest the time and money in properly building a foresight program that will leave the students with a strong capability and understanding of the techniques and power they can have on the world. Improper use can have long lasting effects on the users.” Rob’s remarks are not an indication that foresight can be harmful per se, but rather that misunderstanding the methods and application of foresight can steer business managers in wrong directions.

Done well, a foresight educational experience can create a significant number of foresight advocates that can shape the emergence of a longer-term perspective in business leadership. These ambassadors can be a driving force in integrating foresight into organizations, and empowering better decision-making not just by individuals, but by entire enterprises. Mike Darche, another former student and current web entrepreneur shares this perspective, “Foresight enables me to turn each employee into our best employee.” This is a powerful insight and aligns with the perspective of foresight pioneer Peter Schwartz who remarks in his paper, “Learnings from the Longview”, that foresight works best when the posture and process of thinking about the future becomes embedded in the DNA of an organization (Schwartz, 2011).

While we advocate for broader inclusion of foresight in business school curriculum we acknowledge important limitations in this article. Notably, the evidence and outcomes offered are anecdotal offerings from our students and fall far short of a rigorous, evidentiary research design. There is clearly more work to be done. Much like foresight practice where demonstrating value of longer-term thinking, planning, and research is challenging, the same is true for foresight education. We say this not to absolve ourselves or the field from this challenge but simply to acknowledge an ongoing endeavor. And despite the lack of definitive outcomes, important intermediate outcomes are available. These include a ten year milestone as a required course within Mendoza; expansion from the undergraduate to the MBA to the Executive MBA programs; early and continued support from Mendoza’s Business Advisory Council, a group deeply committed to relevant and meaningful business education; donor financial support for notoriously hard to fund soft programs; and continued mentoring support from companies such as IBM, GE, and Fiat Chrysler. Together these help illuminate the promise of foresight education here at Mendoza.

In closing, we offer one final remark from former student and entrepreneur Mary Schlegel regarding the value of foresight in shaping her career trajectory. “The one constant is change. We already know that young people will change jobs and even careers multiple times. Most future jobs don't exist yet. If you can't see the changes coming and do not know how to take action to make the most of them, you'll be at a great disadvantage.” We see this all the time.

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