



REIMAGINING MINNESOTA STATE

About Minnesota State

Minnesota State is an interdependent network of 37 vibrant colleges and universities committed to collectively nurturing and enhancing a civically engaged, socially mobile, and economically productive Minnesota. As a system, we foster the success of all students, no matter where they are enrolled, and we support the vitality of all Minnesota communities, no matter where they are located. With seven universities and 30 technical and community colleges on 54 campuses throughout the state, Minnesota State is the largest single provider of higher education in Minnesota, and the fourth largest system of higher education in the country. Six out of ten undergraduates in the state are Minnesota State students.

We are deeply committed to being a place of hope and opportunity for students who dream of becoming our state's next generation of professionals and leaders – no matter who they are or where they come from. This is critically important for students from communities traditionally underserved by higher education, including the 22 percent of our students who come from families of limited financial resources; 17 percent who are students of color and American Indian students; 13 percent who are first-generation students; and three percent who are veterans and service members. Minnesota State serves more students from these communities than all other higher education options in Minnesota combined.

Our campuses play an essential role in growing the state's economy through talent development. Every year, the system enrolls roughly 375,000 students every year – 120,000 of whom are in non-credit courses and customized training programs designed for businesses – and awards over 38,000 degrees, certificates, and diplomas. Eight out of ten graduates get jobs in fields related to their programs and stay in Minnesota.

Reimagining Minnesota State: Three Big Questions

Through the *Forum on Reimagining Minnesota State*, we will learn together and respond to the three big questions presented by the Chair of the Minnesota State Board of Trustees that will inform the future of the system.

What is Minnesota State's unique value proposition to the State of Minnesota? What are the key educational, economic, and social goals that Minnesota State must address to create a better way of life for all people of Minnesota?

How does Minnesota State foster a culture of innovation, collaboration, and partnership as we share responsibility for the achievement of our key goals? How do we empower our employees and

students to experiment with and collaborate on innovative approaches to move the needle on our key goals?

How do we leverage our “systemness” to the benefit of our students and the state? What is the unique role of our public higher education system that makes the system more than the sum of our parts? How does Minnesota State act more like an interdependent network that fosters the success of all students no matter where they are enrolled and supports the vitality of all Minnesota communities no matter where they are located? How will we offer a diversity educational delivery methods and continue to attract and serve a more diverse student population.

Forum Session 1: Discussion Questions

1. How are the factors/issues outlined in the Session 1 Briefing Paper and presentations impacting your organization/institution now and in the future?
2. What are strategies or promising innovations you are pursuing to respond to these types of disruptions? How do you address issues of equity and inclusion within the execution of these and future strategies?
3. What are opportunities for Minnesota State institutions and other organizations to partner and collaborate in order to more successfully address these forces or pursue future strategies?
4. In order to address these disruptions, how might Minnesota State encourage, support, and enable greater innovation and entrepreneurial activities without losing its responsibility for advocacy and accountability?

Forum on Reimagining Minnesota State
Session 1: The Forces Impacting U.S. Higher Education
Briefing Paper 1

By Dr. Lisa H. Foss, Chancellor's Fellow

Futurists, journalists, scholars and institutional leaders alike are attempting to predict how the many forces, both positive and negative, will impact higher education institutions in the next 5-20 years. Briefing Paper 1 attempts to provide a brief overview of the themes emerging from these national viewpoints. These topics will be covered in more depth in future Briefing Papers and Forum Sessions. Overall, there is relative agreement that the pressure for change in higher education is coming from two distinct directions. The first set of forces are rooted in higher education's history and current context. The second set are coming from rapid and accelerating forces that are impacting industries and sectors around the world. The eventual impact of these forces and how to address them is still very much up for debate.

Direction 1: Forces from Context and History

There is nearly universal agreement that the converging factors of market forces, economics, and the current value proposition of higher education are challenging the traditional business model of the industry. The factors of shrinking traditional markets, growing competition, limited tuition and state funding potential, and increasing costs combined with questions about the value proposition of higher education have made current approaches unsustainable.

Demographic shifts in the traditional college going population across most of the U.S. have increased the competition for those students and the bargaining power of their families. There is a recognition that enrollment stability, let alone growth, must come from non-traditional students, including adult students, part-time students and students who traditionally been underserved by U.S. higher education. Nationally, the high school population, now flat, is expected to drop significantly beginning in 2025. Currently, about 1/3 of enrolled students are over 25 years old, and almost 40 percent are enrolled part-time. These figures are only expected to grow. While these student populations create opportunities for growth, their service needs and expectations will require the development of different educational and service delivery models that will require investments and additional spending. In addition, competition for these students, especially from both the for-profit and flagship institutions, will become fierce as most institutions are recognizing the growth potential and demand from this segment.

For public institutions, the **declines in state support** that resulted from the 2008 recession have created a greater dependency on tuition as a revenue source. This is occurring as state legislatures are limiting the ability of public institutions to raise tuition, and student ability and willingness to pay have created a real limit on the amount of tuition increases that are even feasible. Some believe that the recession has permanently reset higher education state funding at lower levels.

The **higher education delivery model**, heavily focused on lecture-style, face-to-face instruction, has been difficult to adjust even as revenues have declined, as the industry has struggled to find appropriate strategies for cost reduction that increase efficiencies while maintaining or improving quality and educational outcomes.

Other challenges are more ideological, as the public is increasingly **questioning the real-world value of a college or university degree** and higher education is seen more as a private good than a public good. Increasingly, students and families are looking for a return on investment. As they are bearing a greater responsibility for cost, they are looking for clear value for their money. Increasing costs have pushed many students to take on debt. Close to 60% of all college graduates take out loans averaging a total debt of \$20,000 per student. While 9% of college graduates default on their loans, the default rate among students who do not complete their degrees is almost 25 percent.

Completion rates are also a topic of public concern, as approximately half of all students who pursue a degree actually successfully complete one. The path to completion is especially difficult for students who do not have a strong academic experience in high school; for older students returning to college or enrolling for the first time; and first-generation students. These challenges are compounded for students who come from low-income families or are students of color. While there is universal agreement that increasing completion is critical, many higher education leaders warn that access without quality is a hollow promise. Calls for increasing academic quality and for developing a better understanding of what students are actually learning are increasing, as employers and the public alike are expressing concerns about misalignment between what students learn in college and what is required to join the workforce.

A major challenge is addressing the critically important but **potentially competing goals of enhancing quality, increasing completion and improving affordability** all at the same time. The Commission on Undergraduate Education has challenged institutions and systems of higher education to “adopt the more challenging and ultimately rewarding path that addresses completion, access, and quality simultaneously” and to hold ourselves accountable for these outcomes through an equity lens (Academy of Arts and Sciences).

Direction 2: Forces from a Rapidly Changing Environment

Changing Nature of Work

The world of **work is changing rapidly and most agree will only accelerate**. New technologies and emerging industries are developing quickly and the skills needed to work in those industries are not always part of any college curriculum. Some predict that automation will make obsolete millions of jobs but create millions of new ones, requiring new skills and competencies for existing workers. Another trend is the emergence of what some are calling the “gig” economy, in which people are hired on a task-by-task basis, often through a digital marketplace, to work on-demand rather than as full-time employees. In this future environment, individuals will need the ability to be adaptive and self-directed and have access to institutions that will support their development.

Responsiveness to rapidly changing work environments will require an increase in the quality and frequency of **connections between institutions of higher education** and industries and communities. Some are even arguing for the creation of more formal bridges between the two that create ongoing opportunities for innovation in both industries and within the institutions.

In addition to new skills, the need for a more diverse workforce and a shortage of qualified workers has caused companies to explore **new approaches to the credential** and how knowledge is validated, raising

the question if the current types of college credentials is the best way to judge a potential employees knowledge and capabilities.

But even as industries change and new technical capacities are identified, there is a growing recognition that all graduates, regardless of credential, need an education that **includes both liberal learning and practical skills**. The both/and model that provides marketable skills and encourages intellectual resiliency and flexibility will be necessary in order to navigate the rate of change in American society and to enjoy a successful career and social and economic mobility over a lifetime. This will require a rethinking of how to infuse critical thinking, communication, writing, problem solving and a comfort and facility in diverse environments across all educational experiences and how to purposefully integrate practical skills into our liberal arts degrees.

The world of rapid acceleration will require higher education to rethink how to deploy new academic programs more quickly and how to create credentials that can be consumed by learners in smaller chunks and meet both employer and student learning needs in the moment. This approach would offer learners flexible opportunities to engage in lifelong learning and skills development through micro-credentials, badges, and nano-degrees” – in an accelerated format – with the ability to eventually stack these credentials into a degree.

Changing Student Expectations and Enrollment Behaviors

Credit for multiple forms of learning. How students consume higher education has been changing. Only a small percentage of undergraduates begin at a single institution and leave that same institution with a degree within a standard timeline. Learners are moving between institutions, acquiring college credits in high school, pursuing studies during military assignments, and increasingly are looking for opportunities to receive credit for work and life experience and for knowledge and competencies they already have. Institutions are feeling pressure to be more open and willing to evaluate, recognize and apply what students have already learned to future credentials as a mechanism to create lower barriers for non-traditional and working students and shorten time-to-degree and reduce cost.

Open-loop, life-long and just-in-time education. Another anticipated change is that students will increasingly be unwilling or unable to dedicate a fixed amount of time to earn a whole degree. Called open-loop learning, it is a model by which students move between their institution of higher learning and the work place or volunteering, as they build their own educational path. Another trend is the recognition that life-long learning will become increasingly important in order to develop new skills and competencies as career paths and work environments change. In response, institutions may need to create more nimble entry and exit points for students that allow them to mix learning and work as they pursue their learning goals. The “just-in-time” concept is imagined to extend over the lifetime of the learner, as they encounter different learning and skill development needs over the course of their career. In this model, learners will be looking to educational institutions to be their lifelong learning partners and institutions will manage their relationships with their students and alumni over the life of their careers.

Opportunities for Technological and Digital Transformation

There is much discussion about the possibilities and challenges of leveraging technology to transform the higher education industry. Across industries, digital transformation (the application of digital

technologies to products and services through customer experience design, user-centered design and hyper-personalization) is changing the user experience and how people are interacting with product and service industries. Advances in artificial intelligence and data analytics are creating opportunities to leverage smarter, lower-cost services at scale. Because of the rapid pace of the digitization of the world's information, many believe universal access to the world's scholarly knowledge will be an achievable goal and perhaps even a right.

There is a growing consensus that technology has the opportunity to impact higher education and its learners along three major themes.

Technology has the potential to provide greater access. Learners are no longer limited by time or place as a determinant of what educational options are available to them. And increasingly the choice is not online or face-to-face. Students will expect more hybrid combinations in the future because they will want the benefits of face-to-face experiences with a robust, technologically enhanced learning environment. Another future expectation is that students will be less willing to spend class time or pay tuition learning basic knowledge that is readily available through other sources and instead will prefer class time be focused on the application and integration of knowledge, through hands-on learning and collaboration.

Technology will enhance and personalize the learning experience. In the academic experience of the future, adaptive learning technologies will provide personalized content based on the level of the student and allow them to move quickly through content they already know. The technology will adapt and respond to the student, creating customized content and personalized self-study curriculum. Embedded remediation, personalized learning pathways, and instruction that responds to a student's prior knowledge are seen as especially promising for students who come to college underprepared or with a range of different skills levels and learning needs. Emerging technologies are being designed to monitor a student's progress, not just in a single course, but over the course of their college career, to empower the student to make informed decisions about their own learning and to track other forms of learning that are not part of the official education system. E-learning systems will create opportunities for collaborative and immersive learning through animations, gaming and hands-on simulations. Technology also has the opportunity to create a greater sense of community through social networking and team-based projects, and some see possibilities in bringing students from different backgrounds and experiences together by expanding the classroom to other parts of the world and creating more common spaces and opportunities for meaningful interaction.

Technology will allow for the streamlining and personalization of services. Another area of discussion is the potential for predictive analytics to create personalized pathways and on demand support to improve retention and success. Electronic student support systems are being designed to monitor student engagement and degree planning and allow for automated messaging and warning to faculty and advisers when students are perceived to be in trouble, even before the student may be aware of the issues themselves. Other opportunities include automated closed captioning and descriptive text in order to improve accessibility. Because of the potential of personalization through predictive analytics, some see a future in which institutions provide tiers of services based on student needs. This will require an unbundling of many of the student services that are now considered as a single product so that learners can access those that are most relevant to their educational experience.

Cautions and Considerations. Leveraging technology to support something as personal as learning will not be easy, and it requires some careful considerations. The most significant concern is that access to

technology and high-speed Internet is distributed disproportionately. Currently 24 million Americans, mostly poor and rural, do not have Internet access. Ensuring equity will require a consideration of how to deliver and provide equal access to those students who already are disadvantaged.

Emerging research points to the role of connections and engagement as an important element that drives student success. Done incorrectly, as a means to drive efficiencies and cost reductions alone, technology can create and reinforce a sense of isolation and disconnect and lower the quality of the educational experience. Even as technology is used to provide more services and instruction to students, institutions will need to rethink how to provide person-to-person contact between the institution and student that is built into every digital learning experience.

There is limited research on the positive impact of classroom technologies on learning, especially in the foundational dimensions of higher education – critical thinking, creative problem-solving and human interaction. There also is widespread concern that not all students benefit equally, and some are negatively impacted, by online instruction. Students from high-risk populations learn less in online courses than from equivalent face-to-face courses.

There is emerging consensus that the optimal instructional model in the future is one that blends the traditional and the technological and that advanced technologies such as artificial intelligence, machine learning, and automation, should be used, not as a replacement for but to complement, enable and improve teacher-student interactions. The human connection remains critical with well-designed technology as the enabler for that connection. Courses and content will need to be thoughtfully designed using best practices in learning science and focused on creating connected and collaborative learning experiences.

New Approaches to Measuring Learning

Direct assessment of student learning is a topic of significant discussion in U.S. higher education, both as a way to demonstrate what students are learning with the purpose of curricular improvement and as an alternative approach to progression through educational content. Faculty across the country are doing important work to develop assessment approaches that accurately measure what students know and can do within their own programs, but reliable measures of student learning within and across colleges and universities is still limited.

Without consistent and comparable measures of student learning that take into account the full range of student characteristics and institution types, it will be difficult to keep quality student learning central to any attempts to develop new educational delivery approaches amid calls for greater levels of accountability from the public.

Creating better approaches to measuring learning gains opens up additional possibilities for the integration of learning that has occurred through multiple experiences and institutions and also to untether learning from seat time – the current common measure of learning. It also would allow institutions to understand what approaches are most effective with different types of learners so that student-centered and more personalized learning can occur through the use of more effective learning analytics.

A Renewed Focus on Teaching and Learning

But with all of the interest in new credentials and approaches to learning, there is an increasing recognition that the richness and rigor of learning still depends on the quality of instruction and student connections to faculty. And increasingly there is a recognition that higher education needs to invest in ongoing professional development for faculty in promising teaching methods and needs to reward high quality and effective teaching. There is a growing body of research that indicates students learn more and fail less when instructors utilize more effective teaching methods informed by learning science.

With the important role faculty play in student learning, there are increasing questions about how non-tenure track and adjunct faculty can be better supported and the roles institutions need to play in ensuring all faculty have the opportunity to build successful professional lives. Suggestions include being more purposeful with support and professional development and integration into the academic life of the institutions.

Making the most of faculty expertise and time is a common theme. Some are proposing that in order to meet the rapid pace of change and to leverage the possibilities that a technology-enhanced learning experience could provide, the traditional role of faculty may need to be disaggregated. This would involve faculty leading a team of people that develop and deliver the course, with the goal of supporting and complementing faculty in their role of developing the curriculum and not supplanting it. Common functions that are discussed as part of disaggregation include course design and delivery, technology integration, advising, tutoring and assessment.

Forum Session 1 Reading List:

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