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A Quest for Success: How Technology and Data Transformed Middle Tennessee State University

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INSTITUTIONAL PROFILE

Located in Murfreesboro, Tennessee, Middle Tennessee State University (MTSU) is a public, nonprofit institution. MTSU is the top destination for transfer students in Tennessee. Offering more than 300 undergraduate and graduate degrees, MTSU is a High Research Activity doctoral university that enrolled 22,080 students (15,520 FTE and 3,668 part-time undergraduates and 2,892 graduate students) in fall 2020. Student body demographics include 44.9% men and 55.1% women. Most undergraduates (85%) are 24

years of age or under; 87% come from the state, and over 50% are enrolled in distance education. More than 34% of students are first-generation college students (as defined as first in their family to attend college), and while more than 86% receive some sort of financial aid, only 37% of students receive Pell Grants. Regarding race and ethnicity, 65% self-identify as White, 17% Black or African American, 7% Hispanic or Latino/Latina, 4% two or more races, 4% Asian, and less than 1% Indigenous (American Indian, Alaska Native, Native Hawaiian).

A COMMUNITY APPROACH

Middle Tennessee State University seeks to become a nationally renowned thought, practice, and results leader in student success in higher education. The institution has embraced this responsibility over the past several years by making deep cultural shifts, as well as role and process changes, all underscored by a belief in the power of data and technology. MTSU President Sidney McPhee is a strong advocate for placing student success at the center of the institution's mission. Commenting on the university's tagline, he notes "When we say, 'I Am True Blue,' it affirms that we are part of a tight-knit community of fellow students, professors, staff, and supporters, all working for your progress and success." It's this community approach, supported by data and technology, that enabled MTSU to build on its successes in iPASS, a grant managed by Achieving the Dream (ATD) and EDUCAUSE focused on advising redesign using technology. MTSU's use of data and technology demonstrates how the institution has been able to transform the student experience and has contributed to significant increases in retention and graduation rates.

QUEST: A TRANSFORMATION ORIGIN STORY

MTSU's transformation journey began in 2013 with the establishment of the Office of Student Success and the release of [Quest for Student Success](#), the institution's strategic plan for improving retention and completion. Each of the nine colleges had separate advising offices, resulting in student advising experiences that were inconsistent. Quest for Student Success defined the ideal student advising experience and implemented new processes to ensure consistent delivery across the nine colleges.

In 2013, MTSU was awarded the first of two grants to redesign its advising practices using technology. The grant funds enabled the university to purchase technology and offered technical support. In 2014, MTSU implemented a new predictive analytics software system and within weeks became one of the top two users in the country of the EAB SSC system. The institution also reallocated approximately \$4 million internally to hire more advisors to enable a student-to-advisor ratio of 300:1. MTSU wanted to reinforce the idea that advising transformation relies on people and process, not just new technology. To this day, the institution prioritizes advising relationships by using an internally developed algorithm to maintain a similar ratio.

BUILDING ON EARLY SUCCESSES

The institution's initial success led to MTSU's being selected for a second round of funding for advising redesign. Leaders focused on enhancing the university's predictive analytics work, tracking referrals to academic supports, and tailoring the approach to degree planning. As is the case with all successful technology initiatives in a college environment, implementation was first focused on use and adoption by primary users, with an emphasis on creating a culture where the utilization of technology platforms was the expectation, not an option. Once technology platforms were implemented, the attention shifted to their application, and deans and other leaders at the unit level developed strategies leading to improvements across the entire institution.

MTSU had implemented DegreeWorks, a degree planning tool, and by 2018 the student experience of advising had completely changed. DegreeWorks helps students independently explore different pathways to their goals, register for classes, and track their progress to completion. This frees up valuable face-to-face time for advisors to spend with students. The degree planning tool also helps advisors prepare for student meetings because it provides access to data on the student's goals and current academic plans. Students needing additional academic or personal support can connect with these services thanks to the data made available by the new technology.



MTSU's advisors were also empowered to make their own improvements. They formed a Professional Development Committee to identify opportunities for advisors to refine their practice. The committee has already made significant accomplishments, including the following:

- A year-long calendar has been created for professional development and training. This includes webinars from the Global Community for Academic Advising (NACADA), nationally known speakers on student success, professional development, and training.
- An Advisor Mastery Program (AMP). This is a points-based program in which advisors work to earn an AMP certificate. The AMP certificate is tied to future professional development funding to attend professional development, training, and conferences.

The institution made other changes to enhance advising:

- Appointing an advisor manager for each college to help provide oversight and ensure advisors are supported in implementing new processes and tools. The advisor managers help ensure consistency across the colleges.
- Creating workspaces for college advising centers.
- Developing a yearlong education and training program to prepare and acclimate advisors to a new student success paradigm.

All these efforts have led to an advising culture at MTSU that is student centered, data informed, and strategy driven.

CULTIVATING A CULTURE OF SUPPORT FOR EVERY STUDENT

MTSU's student success work goes far beyond advising. The institution's North Star is to cultivate a culture in which all students are treated equally and are fully supported in their success. This is an ongoing effort that relies on everyone at the institution. In the past few years, MTSU's approach to this vision has shifted to intensify the focus on what different student populations need to accomplish their goals. The institution owns its responsibility to provide every single student with the greatest possible chance for success.

As the national conversation on equity has intensified, so has MTSU's commitment to close equity gaps. This commitment to equity is central to the institution's Quest 2025 strategy, the next phase of the student success efforts. All three of the goals outlined in Quest 2025 are explicit in their intention to close equity gaps in access to the institution, success in academics and life, and learning and career outcomes for students.

Technology and data have equipped the institution with the tools needed to do this. For example, the REBOUND program is a comprehensive approach to supporting students who struggle in their first semester to get back on track academically. Launched in 2015, it provides specialized advising and programming to first-year students who earn less than a 2.0 GPA their first semester. The program has proved consistently successful since launch. The one-year retention rate for students who participate in REBOUND is consistently around 50 percent higher than for students who do not.

Another example can be found in the university's plan for student success. MTSU had been discussing the need to offer evening and weekend advising appointments for years. Now someone is available to support students during these times. Technology was critical to accomplishing this, and evening and weekend appointments are now virtual, which provides flexibility to the students and the advisors.

DATA AND TECHNOLOGY AS THE FOUNDATION OF CHANGE

Leadership's philosophy around data and technology is just one reason MTSU has been able to accomplish so much. From the beginning of their advising redesign journey, faculty have viewed the technology tools that the grants enabled them to purchase as "the glue that anchors the need to do things differently," according to Rick Sluder, vice provost for student success. They approached advising redesign from the beginning purposefully, understanding that transformation requires careful planning to make bold change a reality.

Commonly referred to as "digital transformation" (see sidebar), this approach to change required staff and faculty across the institution to work together in new ways and use data in every aspect of their jobs. Two examples illustrate how far MTSU has come in its transformation journey:

- The institution recently shifted to building class schedules around students' lives instead of faculty's timelines. This involved acknowledging the structures, processes, and attitudes that propped up the old approach and recognizing that they are no longer serving their mission. Data are critical to the success of this approach because it requires a deep knowledge of the students the institution is serving.
- Budgets are now built based on where the data show greatest need and potential impact. Changing how budgets are allocated can be a sensitive issue, but MTSU's transparent leadership and culture that encourage open dialogue around the data made it feasible.

This success continues to be supported by a strong institutional research (IR) department, allowing for maximized data collection and usage. IR staff help MTSU center students in their decisions by providing data stories that bring student voices to the table. The degree to which data have become embedded in every corner of the institution is illustrated by the mantra "Know your numbers. No exceptions. No excuses. No escape."

Yet, leadership knows that the data are merely a means to an end. Value is only realized when the data are translated into insights that are used by everyone to make informed decisions. Leadership has ensured that data are democratized across the campus by adopting a value of transparency and dialogue. Officials at every college can see their own data and the data of other colleges at the institution. The goal is not to blame or weaponize the data. Rather, the data are shared to support a collaborative, community-wide approach to supporting MTSU's students.

DIGITAL TRANSFORMATION DEFINITION

Digital transformation (Dx) is a series of deep and coordinated culture, workforce, and technology shifts that enable new educational and operating models and transform an institution's business model, strategic directions, and value proposition. Dx can make institutions more resilient, flexible, and relevant as they face an array of increasingly difficult challenges.

Dx is being driven by technology trends and changes that are enabling an innovative approach to everything from how digital architectures are being incorporated to how campus leaders interact with the IT organization, all targeting improved student outcomes, more effective teaching and learning methods, new research capabilities, and an evolution in business models. Dx requires agile and flexible leaders at all levels who can enable the college or university to achieve its strategic aims rapidly and efficiently.



For more information visit the [Digital Transformation page](#) in the EDUCAUSE Library.



CONTINUING THE QUEST FOR SUCCESS

For [Strategic Priority 2](#) of Quest 2025, MTSU embraces a mindset of continuous improvement, with the goal of eliminating outcome gaps on all key measures and increasing the diversity of faculty and staff. The institution continues to adopt new technologies that can transform how it works to serve its students. Institutional leaders are currently working to stand up a new chatbot that will offer instant information to students. Not only will students get answers to procedural questions quickly, but the tool will also free up staff time to focus on deeper topics of exploration with students. As a testament to the culture of MTSU, the student response to the new tool was an eagerness to know when it would be ready to use.

The effort to standardize and scale best practices also continues. When President McPhee saw that one college had built a dashboard tracking enrollment numbers daily, he made the decision to scale it to every college. Leadership responded swiftly, building a prototype within a few weeks that the provost used to inform discussions across the colleges' leadership about how they will use the data to inform their work.

Looking ahead, leadership has identified three core priorities:

1. Equipping faculty with the tools and support they need to be exceptional teachers. This includes keeping updated with high-impact pedagogical practices and also implementing technology to support teaching efforts.
2. Closing equity gaps by using data to identify what additional changes the institution needs to make to better serve various student populations.
3. Expanding online, hybrid, and off-site options to provide more flexibility to students. MTSU already had a strong set of online offerings prior to the COVID-19 pandemic, helping the institution make the shift to fully online teaching. This includes advising. Seventy percent of all advising appointments are virtual, and missed appointments are down because of easier access for busy students.

The work that MTSU started in 2013 with a bold vision for student success and a grant to purchase advising technologies has led to real, concrete transformation. Data now underpin every decision, and technology and change are embraced across the institution. Departmental silos have been deconstructed. Processes are constantly scrutinized to identify opportunities for improvement.

Students are now at the center of everything the institution does. They are afforded the opportunity to provide feedback on their advising experiences every semester. In addition, since 2013, a comprehensive survey has been administered every two years. Results show that students' ratings have improved for items including advisor availability, responsiveness, and effectiveness.

LESSONS LEARNED

- **Cultivating multilevel leadership is critical to digital transformation.** Much of MTSU's success was facilitated by the leadership's approach to change management. They led teams in collaboratively developing the vision for the work to build support, laying out why the change is needed and a clear pathway to implementation. Then, they empowered the right people to implement the change and stepped back to allow them to make it happen, providing support and guidance along the way. Finally, they used data to show the progress that was being made to maintain energy for the change.
 - **Democratize data to fuel transformation.** Transparency in data and dialogue within a nonjudgmental culture has enabled MTSU to make bold changes. Leadership is making sure that faculty are up to speed with the use of data and sharing results between departments.
 - **Create protocols to guide engagement.** Much of the work of digital transformation at MTSU hinged on the willingness of people to change their work behaviors. Research in behavioral psychology shows that the easier the behavioral change, the more likely someone is to adopt it. MTSU created protocols that outlined specific details about expected behaviors around how and when specific technologies and data should be used. This was not used in a restrictive way—these protocols could be adjusted where data showed what was needed. These protocols made it clear to advisors exactly what was expected of them and made it as simple as possible for them to follow new processes.
 - **The value of data and technology comes from how they are used, not their mere existence.** The institution used data and advising technology solutions to create a student experience that is consistent in quality and tailored to provide supports for each student. Campus officials accomplished this by focusing on the processes that guide how people use the tools and the support and accountability mechanisms that ensure their adoption.
 - **Don't be afraid to go big.** MTSU has found that scaling up is harder than scaling back when it comes to digital transformation. The approach is to set high expectations and provide the tools the team needs to accomplish them.
 - **Keep reinforcing core messages that illustrate why change is needed.** MTSU did this by centering student stories alongside the data to keep students at the center of the conversation.
 - **Value your people in words and in actions.** None of the successes MTSU has accomplished would be possible without the staff and faculty doing the hard work to implement a bold vision. The campus has a 70/30 theory of change, whereby 70 percent of the student success work is accomplished through people, 15 percent through process, and 15 percent through the application of technology.
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WHERE TO LEARN MORE

For more information on the work being done at Middle Tennessee State University, feel free to reach out to Rick Sluder, Vice Provost for Student Success (rick.sluder@mtsu.edu).

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