# Built for the Moment
A Descriptive Account of How Wisconsin's Technical Colleges Respond and Adapt During COVID-19

The COVID-19 crisis has brought unprecedented disruptions and challenges to postsecondary institutions. In response, Wisconsin's technical colleges swiftly modified their instructional approaches of nearly all offerings and countless other aspects of college operations and services. At the same time, numerous, rapid changes can result in confusion, information overload, and concern that students' needs may not be fully addressed. Timely research will bring clarity and direction in light of the influx of initiatives and information. Crisis as Catalyst for Change and Innovation (**CCCI**) fulfills that need. **Funded by the National Science Foundation (DUE-2100029), CCCI is a longitudinal study of change and innovation in technical education** and associated implications, consequences, and lasting impacts.

CCCI is led by Principal Investigator Xueli Wang (UW-Madison), Co-Principal Investigators Turina Bakken and Mary Ellen Kraus (Madison College), and with insight and support from the Wisconsin Technical College System (WTCS). In this inaugural research brief, we present a global picture of the adaptations and new initiatives that emerged during the pandemic across WTCS institutions, depicted in the figure below. We generated this descriptive account based on analysis of the news stories covered in WTCS news-in-briefs from March 2020 to May 2021. While not exhaustive, the newsletters are a rich source that extensively covers the colleges' efforts since the pandemic. We combined text mining techniques and qualitative coding to harness the large volume of text data in generating an overview of various adaptations burgeoning in the WTCS since March 2020.

Institutional Response and Adaptations in Wisconsin's Technical Colleges Since March 2020
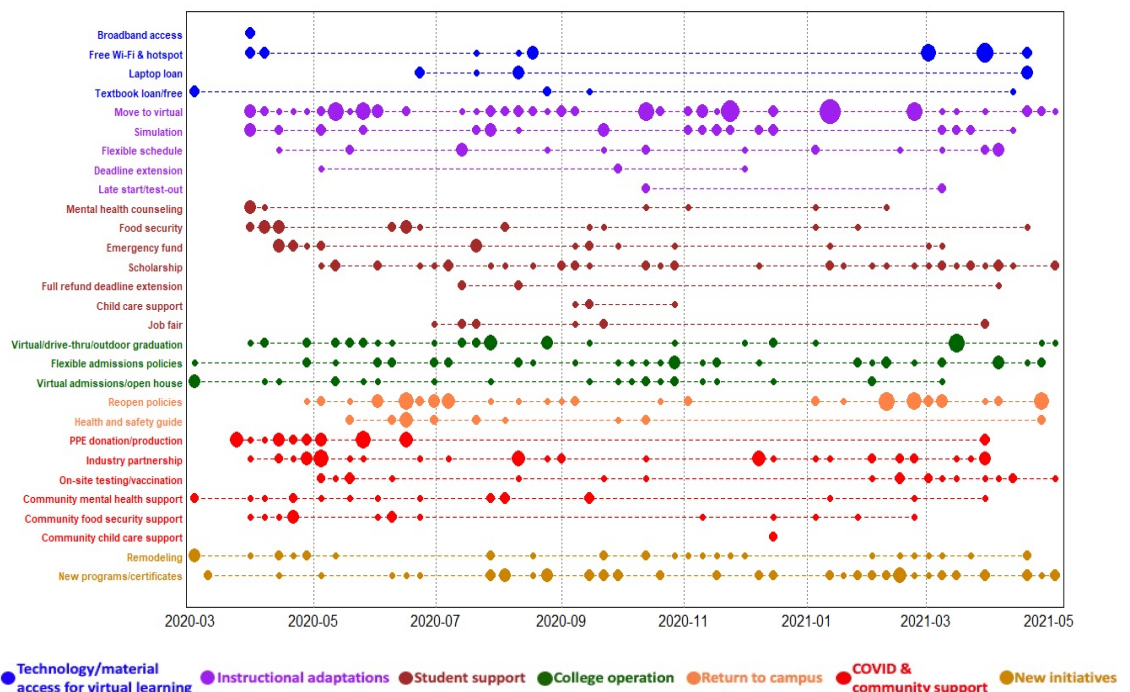
~ Five Major Observations ~

In light of the findings, we offer five major observations informed by our collective expertise in education research, practice, and leadership. We hope these descriptive findings serve as a reflective sounding board for colleagues in the WTCS in their ongoing efforts to support students and one another.

1. What types of adaptations have the colleges made?

The adaptations are numerous and holistic, spanning nearly all facets of technical education. We organize them by **7** broad areas:

● **Technology/material access for virtual learning.** Efforts were made to broaden students' access to internet, technology equipment, and course texts, often free of charge.

● **Instructional adaptations.** With the shift to virtual learning, teaching innovations such as simulation are budding, along with greater flexibilities in scheduling, deadlines, and assessments.

● **Student support.** Wide-ranging efforts were implemented to help students with critical basic needs throughout the pandemic, including mental health counseling, emergency funds, food security, and childcare.

● **College operations.** The colleges modified their graduation ceremonies and conducted virtual admissions and open houses.

● **Return to campus.** There was an influx of reopening policies and health and safety guides to ensure a safe return to campus.

● **COVID-19 and community support.** The colleges participated in the production and donation of protective gear, on-site testing and vaccination, and community relief.

● **New initiatives.** Some colleges engaged in remodeling and establishing new programs and certificates in response to changing economic and workforce conditions.

2. What key patterns and priorities emerged among the influx of institutional adaptations?

Underlying these adaptations are themes of **access and flexibility**, **holistic support** for students, **community focus,** and the colleges' **agility to innovate**.

The colleges have shown their commitment to **access and flexibility** by putting in place the resources, structures, and policies for students to continue with their courses and programs amid massive external disruptions.

Through targeted services that honor multiple identities, life contexts, and needs, the colleges have rendered **holistic supports** for students as whole persons.

A **community focus** is exemplified by the colleges' active involvement providing COVID-19 and related supports to the local communities.

The colleges have demonstrated their **agility to innovate** through (re)creating teaching and learning, program offerings, and credentials throughout and beyond the disruptions of COVID-19.

3. How do these efforts unfold over time?

Overall, there was a steady stream of efforts in response to the ongoing pandemic, but some efforts fluctuated over time. For example, mental health and other basic needs supports for students and the community were very active during the onset of the pandemic in Spring 2020. These efforts, although ongoing, were less reflected in reports on the colleges' adaptations and responses over time. As another example, new technical programs and certificates were not active initially, but grew consistently in the latter part of 2020 and into 2021. Additional trends are depicted in the figure on page 1.

4. How are diverse student populations reflected in these efforts?

The colleges' flexibility in admissions, enrollment, and course policies during the pandemic demonstrates their overall commitment to supporting students, especially minoritized groups who may face amplified, interlacing challenges during COVID-19, thus needing targeted support. Those **who are parents** were provided childcare supports. Students from **low-income** families received heightened attention through financial support, equipment access and rental during remote instruction, and food security efforts. The colleges served students with **mental health** conditions with relevant counseling and supports. In our ongoing analysis, we also observed an **increasing focus on diversity, equity, and inclusion (DEI)**, including events and talks, training on equity and criminal justice, and emergency funds for students of color.

5. What's missing or less reflected?

We also identified a few areas that were missing or less reflected in the text data. It is important to note that these less reflected or "missing" areas do not necessarily demonstrate a lack of efforts. There may be related initiatives, but they were not communicated or portrayed through the media sources examined in this initial round. Nonetheless, what is being communicated, albeit imperfect, can reveal to some extent priorities in efforts and resources, and we pose these two areas below as food for thought and reflection.

First, support and development for faculty and staff were areas that did not emerge prominently in reported institutional responses and adaptations. While the colleges made tremendous steps in instructional adaption and more holistic student supports, it would be **critical to implement or highlight relevant faculty and staff development and supports**. This is vital as faculty and staff carry the bulk of the responsibility for serving students.

Second, although we saw an increased focus on DEI in the media sources we examined, it was difficult to determine if DEI efforts were sustained beyond one-time workshops. This is an area that should be further explored to **identify or inform the various ways in which colleges center and sustain DEI** in serving students equitably.

~ How Can These Findings Inform What Is Next? ~

In the face of the continuing pandemic, critical challenges remain for Wisconsin's technical colleges to provide the right kind and amount of support for students and one another. **How do the emerging findings from our CCCI project inform what can be done now and in the near future?** While not exhaustive, the following **reflective questions** serve as a point of departure.

Faculty and instructional staff

- How have my/our instructional adaptations (virtual/hybrid/etc.) influenced students' learning experiences and outcomes? Have I noticed any disparities in students' experiences and access to resources and supports that they need to succeed?

- How has my view of what it takes to succeed in the "classroom" (or workshop/lab/etc.) changed throughout the pandemic? What efforts have I taken to ground student learning within their holistic life contexts, identities, and needs?

- How would I approach teaching new incoming students who have been through COVID-19, including recent high school students? What can I do to clearly understand their expectations and needs that may be different from those of the students I worked with during the pandemic? How can this understanding inform my decision to keep the kinds of adaptations that may work well for them and adjust those that may not?

Student affairs/services/supports professionals

- How can we provide ongoing support for students who face continued, often intertwined challenges, such as lack of financial support, limited technology access, food insecurity, mental health concerns, childcare needs, and transportation difficulties? What are we doing well that we can amplify? What new student services models, approaches, and venues should we explore?

- How can we ensure a smooth back to campus experience for returning students whose use of services was modified or disrupted over the past year? What might be new or shifting expectations regarding our services among both returning and new students, and how should we be ready for them?

- What emerging knowledge and skillsets are essential for student services professionals to meet students' needs during and beyond the pandemic? In the meantime, how can we allocate workload to ensure balance and avoid burnout? What structures and incentives should we explore to optimize the flow, quality, and environment in our workplace?

Programs/departments

- How have the industries connected to our programs adapted in response to COVID-19? What new ways have they been served by our program? Which adaptations will be carried forward post-COVID-19? What additional technical skills will industry require? Are there any technical skills that have become obsolete? What are the program and credential implications and opportunities as industries recover at different rates?

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- How have the essential workforce skills required of our students changed in response to COVID-19? What new core workforce skills will need to be taught in program courses? Which new and existing workforce skills will need to be emphasized?

- Has the COVID-19 response created any new roles or job types that could be employment options for our program graduates? What opportunities have emerged for new short-term and/or interdisciplinary credentials, particularly those that could be taught in an accessible format (distance education/hybrid, weekend, evening, or other alternate scheduling formats)? How has the pandemic influenced the growth in non-credit credentials to meet upskilling or reskilling needs?

- What new or enhanced professional development opportunities will be needed to support faculty and staff for training and education in the post-COVID-19 environment? Are there potential pathways to train dual credit teachers to enhance offerings and/or provide new modules of instruction in the K-12 system?

Institutional leadership

- How do we continue to advance a culture of innovation in technical education? How can we best allocate limited resources to optimally support multiple institutional priorities? What should we support and do more of that aligns with our priorities? What should we stop doing? How do we find a balance between traditional, proven practices and new, innovative ones?

- How can our college remain a key leader and contributor toward a highly skilled technical education/STEM workforce? What can the college do to develop, support, and/or revisit new/existing partnerships with our community, local industry, and beyond? How can these partnerships be leveraged toward a thriving local, state, and national economy? How might we ensure that our educational mission is serving all citizens?

- How well are students served by teaching and learning innovation at our college? How is that service measured? Are there certain approaches or strategies that are highly effective for certain groups but not others? Who is being well served, and who isn't? How can we encourage and implement teaching and learning innovation that effectively and equitably serves all students?

- How can our college design and implement flexible, supportive work policies that allow faculty to thrive in our workplace with high levels of community, connection, and service?

Ultimately, we invite colleagues invested in technical education to join us in reflectively asking and acting on these questions: What realities and inequities that affect technical college student progress and success were revealed during the pandemic? What can we do to fully understand and address those realities and inequities to ensure students have the supports and structures in place to succeed?

~ Concluding Thoughts ~

The adaptive and cutting-edge nature of technical education cannot be overstated, especially in the wake of COVID-19. WTCS institutions have embodied that spirit over the pandemic through their tireless efforts. Moving forward, we see three directions for capitalizing on the momentum already being built. First, professional development and support for faculty and staff are key to innovating technical education in a sustainable and generative fashion. Second, college-industry partnerships should be deepened, revisited, or reimagined through a renewed vision around essential, evolving knowledge and skills for students in technical education beyond the pandemic. Third, ongoing, reflective work is pivotal for identifying and resolving persistent equity blind spots in technical education participation and outcomes. In doing so, WTCS institutions are well positioned to be enduring leaders of a highly skilled, successful, and diverse technical education workforce.

~ More on CCCI ~

As a longitudinal mixed methods research project running from June 2021 to May 2024, Crisis as Catalyst for Change and Innovation has evolved to an exciting stage where we are starting to select specific technical colleges and/or technical programs for in-depth case studies. This will help us learn even more about the adaptations and responses detailed in this research brief. In the meantime, we will engage more dynamic text mining techniques to research change and innovations that continue to emerge. Critical to our entire research process, we have assembled a panel of 18 technical college faculty across the WTCS who will provide vital input on our research as it evolves. Ultimately, we center our research on the wide-ranging ways in which technical education responds to COVID-19, while delving into how leaders, faculty, and staff arrived at the adaptations, changes, and innovations, along with their immediate and enduring impacts on technical education and workforce.

~ Technical Note ~

For the findings reported in this research brief, we analyzed the news stories and other website items embedded as hyperlinks in the bi-weekly publication: WTCS news-in-brief. Although not fully inclusive, institutions' changes and adaptations in response to COVID-19 are often described and shared via the internet-based sources identified above. We set the search window to March 1, 2020 to May 4, 2021, and as a result, curated 59 newsletters in which 1,215 unique, publicly accessible, web-based publications were embedded. We extracted these unique publications using Python packages "requests" and "beautifulsoup," which allowed us to efficiently access and document large amounts of data and information from web pages. We then imported these items into R, a versatile software environment for statistical computing and text mining. To help harness the extremely large volume of text data that we extracted with research-informed judgment, we applied text mining techniques guided by one of our research questions that focuses on change and innovations that evolved in the WTCS. First, through an interactive process of reading the titles of the 1,215 publications, we identified 29 broad categories of institutional responses and adaptations. This qualitative, manual process helped reveal the *types* of change and innovations that have occurred. Then, we used these 29 categories to further harness the data using the pattern matching function in R. This procedure allowed us to identify the "frequency" of occurrence of activities/efforts/initiatives that fell under one or more of the 29 categories through matching keywords (or target words) in the web items with the identified categories. This step helped us understand the *magnitude* of specific types of change and innovations. We denoted the magnitude by the number of times activities occurred (either within one institution or across institutions) within a certain category, as depicted in the figure on page 1. We also presented the evolving change and innovations against the time frame of our search, which allowed us to see *how they evolved* over the course of the pandemic.