MISSOURI HIGHER EDUCATION EQUITY
BRIDGES TO SUCCESS

WHITE PAPER:

ENSURING ACCESS TO TECHNOLOGY

DURING THE COVID-19 PANDEMIC

DEPARTMENT OF
HIGHER EDUCATION &
WORKFORCE DEVELOPMENT

CURRENT STATUS

The widespread shift of higher education to online learning last March 2020 had a profound impact on teaching and learning. As institutions' online learning usage went into overdrive, it raised important questions about access to and equity in postsecondary education, uncovering digital and economic divides. These divides, in turn, have had an effect on students' access to technology. As institutions head into the spring term of 2021, educators have identified best practices to ensure educational equity. In this paper, the focus is on equity as it relates to access to technology.

What is Educational Equity?

The achievement of equity requires looking at several aspects: learning outcomes, resources, funding, and academic support. According to the Organization of Economic Co-operation and Development (OECD), a working definition of educational equity is that all students are able to achieve equal learning outcomes through access to and provision of adequate resources (financial, social, academic, instructional, etc.).[1]

Digital and Economic Divides

Online learning requires time management skills and motivation.[2] Additionally, some disciplines are able to adapt to online learning more easily than others. As a result, students already struggling academically due to existing digital and economic divides suffered even more in online courses.

According to a study of 40,000 Washington State students, a contributing factor may be that different populations of students and course contexts have different exposures to technology.[3] Thus, students' skills might be lacking in technology utilization. The study also assessed whether gender and race presented a difference in online learners. Studies have revealed mixed outcomes. Some have found that there was no difference between male and female online learners, while others have concluded that the sample of women was more motivated, communicated online better, and was better at scheduling their online studies. As for white students, the Washington State study suggested they may perform better when compared to Black and Hispanic students because of an economic disadvantage of attending lower quality primary and secondary schools.

Whatever the case may be, the COVID-19 pandemic has shown that students of color and students with low income were more likely to have problems maintaining their access to effective and reliable technology, including laptops, smartphones, and internet connectivity. Unfortunately, university lockdowns and shelter-in-place orders created a loss of livelihood among many students, exacerbating the effects of low income during spring 2020.

Among those affected the hardest were students with disabilities. According to the U.S. Department of Labor, 19.3 percent of persons with disabilities were employed in 2019, which was in contrast to 66.3 percent of persons without a disability.[4] In addition to income loss, some students with disabilities could not readily ensure accommodations were in place for distance learning as some teaching tools were not always available. Also, scheduling and coordinating with institutions was more difficult due to closures of offices providing student services.

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[1] "Equity and Quality in Education: Supporting Disadvantaged Students and Schools." OECD, 2012.
Available at http://dx.doi.org/10.1787/9789264130852-en

[2] "4 Common Challenges Facing Online Learners and How to Overcome Them." Purdue University Global, 7 May 2019.
Available at https://www.purdueglobal.edu/blog/online-learning/4-challenges-facing-online-learners/

[3] Xu, Di et al. (2014). "Performance Gaps between Online and Face-to-Face Courses: Differences across Types of Students and Academic Subject Areas." The Journal of Higher Education, 2014.
Available at https://doi.org/10.1080/00221546.2014.11777343

[4] "Persons with a Disability: Labor Force Characteristics Summary." U.S. Bureau of Labor Statistics, 26 February 2020.

These various problems experienced by vulnerable and at-risk college student populations should be quickly addressed for two reasons. First, increased technology use is expected to continue throughout the academic year and beyond. As of October 2020, 96 percent of the institutions represented in C2i's data dashboard involves some type of online learning component during the fall 2020 term.[5] This percentage includes 64 institutions in the state of Missouri, three of which are going fully online. Second, vulnerable and at-risk students are struggling to continue pursuing postsecondary education. According to a recent U.S. Census Bureau survey, 35 percent of those with a household income of less than $25,000 canceled their plans for fall 2020.[6] In Missouri, approximately 22 percent of postsecondary students surveyed fell under this household income category.

FINDING SOLUTIONS

From a previously published Missouri Department of Higher Education & Workforce Development (MDHEWD) report, the department found that many institutions responded to the need to provide equitable access to technology.[7] Strategies included the distribution of necessary hardware such as computers and mobile hotspots, the creation of Virtual Desktop Infrastructure (VDI) for remote access to specialty software, the provision of funds to assist with necessary purchases related to technology, and increasing Wi-Fi access to parking lots and green spaces. Fortunately, educators have also identified additional best practices and intentional strategies beyond those previously mentioned to help in closing the digital divide caused by the pandemic and to provide educational equity.

BEST PRACTICES
1: Find Ways to Relieve Financial Burden

By relieving the financial burden of tuition and fees, students have more financial aid and other funds available for living expenses. For example, the Alamo Colleges District has a "Keep Learning" plan with four major initiatives: (1) eliminate outstanding student balances up to $500, (2) allow students to take free classes in the summer, (3) reduce the fee to set up a payment plan, and (4) cover the cost of a required test.[8]

However, the pandemic has increased expenses and decreased revenues for institutions. A 2020 fall term survey of 295 college presidents by the American Council on Education revealed that one of the top five most pressing issues is long-term financial viability.[9] One strategy for addressing financial challenges is to control cash flow by postponing planned capital expenditures and by looking for new ways to generate revenue. For example, some institutions have offered empty dorms as temporary housing for health care professionals. Another strategy is to reach out to all donors instead of concentrating on top-level donors only. For example, Eastern Michigan University raised $2 million from small donations that were typically between $25-$100 each.

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[5] "Fall Reopening Plans." C2i, 2020. Available at *https://collegecrisis.shinyapps.io/dashboard/*

[6] "Week 13 Household Pulse Survey: August 19 - August 31." U.S. Census Bureau, 9 September 2020. Available at *https://www.census.gov/data/tables/2020/demo/hhp/hhp13.html*

[7] "After-Action Report: Postsecondary Education Online Rapid Response." Missouri Department of Higher Education & Workforce Development, 2020.

[8] Brownlee, Mordecai I. "Here's How Colleges Should Help Close the Digital Divide in the COVID-Era. EdSurge, 13 July 2020. Available at *https://www.edsurge.com/news/2020-07-13-here-s-how-colleges-should-help-close-the-digital-divide-in-the-covid-era*

[9] Turk, Jonathan, et al. "College and University Presidents Respond to COVID-19: 2020 Fall Term Survey." 08 October 2020.

2: Develop Free Technology Loan Programs

Rethink tuition and fee models to include technology costs that would allow students to request and receive necessary technology which would then be returned at the end of the semester or the end of the student's academic work. For example, the University of Michigan has allowed students to borrow laptops since 2015 without affecting their financial aid package.[10]

3: Equally Reward Students in Technological Use

The increased use of technology requires maintenance. According to one study, students with low income and students of color disproportionately dealt with technology and maintenance issues due to problems such as a poorly-functioning laptop.[11] However, teachers may only reward more affluent students who communicate their need for extensions due to technological issues. One approach is to be proactive in recognizing gaps in learning outcomes related to the use of technology. In other words, watch for signs of students needing help, thus avoiding the requirement for disadvantaged students to have to ask for assistance.[12]

4: Design Courses to be Equitable

The Conversation provides several suggestions for improving equity and access.[13] One is to create accessible materials. For example, ensure compatibility with assistive technologies and readability of all text using appropriate colors and fonts. Another is to understand student needs by asking them directly about their requirements and expectations. One of those needs, for instance, is to be able to asynchronously access captioned audio and video recordings of lectures. Lastly, be culturally responsive by designing learning activities and content that acknowledge students' cultural capital.

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[10] Koenig, Rebecca. "What Happens When Low-Income College Students Borrow Free Laptops?" EdSurge, 5 November 2019. Available at *https://www.edsurge.com/news/2019-11-05-what-happens-when-low-income-college-students-borrow-free-laptops*

[11] Gonzales, Amy L. et al. "Technology Problems and Student Achievement Gaps: A Validation and Extension of the Technology Maintenance Construct." Communication Research, 2020.

[12] "COVID-19, Technology, and Implications for Educational Equity. ASA Footnotes." American Sociological Association, 2020. Available at *https://www.asanet.org/sites/default/files/attach/footnotes/may-june_2020_0.pdf*

[13] "Online Learning during COVID-19: 8 Ways Universities Can Improve Equity and Access." The Conversation, 2020. Available at *https://theconversation.com/online-learning-during-covid-19-8-ways-universities-can-improve-equity-and-access-145286*

5: Reimagine Grading

Inside Higher Ed published a booklet that encourages educators to reimagine grading and other traditional policies during a pandemic.[14] For example, a professor from Eastern Michigan University changed his view on deadlines and penalties. He realized that due to several struggles such as unemployment and poor internet service, vulnerable students already had a lot on their plate. When designing policies, then, educators can be empathetic to their students. As another professor put it, "grades aren't necessarily a measure of skills or ability, but rather the socioeconomic and other privileges students have – or don't."[15]It should be noted the suggestions from the aforementioned booklet are to protect vulnerable students during a pandemic. However, now is a good time to continue the work in recreating courses to be more equitable, taking a hard look at deadline policies, grading policies, nonessential course content, and other potential roadblocks.

The current pandemic raises new questions in this time of uncertainty. Fortunately, the crisis also presents institutions of higher education with the opportunity to create a new system that is more equitable for all students. There is a lot more work to be done. However, as we have seen from various examples in this paper, there are creative ways to meet the needs of the institutions while simultaneously allowing all students to meet the goals of educational equity.

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[14] "Protecting Vulnerable Students during the Pandemic". Inside Higher Ed, 2020.
Available at *https://www.insidehighered.com/content/protecting-vulnerable-students-during-pandemic*

[15] "Protecting Vulnerable Students during the Pandemic". Inside Higher Ed, 2020.
Available at *https://www.insidehighered.com/content/protecting-vulnerable-students-during-pandemic*