The New Digital Divide: EdTech Self-Efficacy & Implications for Online Learning Environments

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92% of students experienced the 2020–21 academic year mostly or fully online

Data from 2021 CIN EdTech Student Survey
3X

more college students learning mostly or fully online compared to 2019

Data from 2019 National Center for Education Statistics
Up to 1 million California students may still lack connectivity during distance learning

Online schooling fails to reach large number of students
What is Josh’s experience with EdTech and online learning?

JOSH

- Attending State University
- Came from a top performing high school
- Both parents have college degree
- Grew up using technology at home and in school
Mary

• Attending State University
• Came from low performing high school
• First generation student
• Got her first laptop for college

How might Mary’s EdTech experience differ from Josh’s?
Student’s confidence in their abilities to learn and adapt to EdTech in the classroom
College Innovation Network (CIN) at WGU Labs

- 10 higher education institutions
- 250k total college students served
- 8 EdTech research projects in the Network during 2021
THE CIN STUDENT SAMPLE BY THE NUMBERS:

- **26**: The average age of students in the sample
- **33**: The average self-reported income percentile of students
- **56**: The percent of students who are first-generation college students
- **76**: The percent of students who identified as female
- **92**: The percent of students who experienced the 2020–21 academic year mostly or fully online

Note: Percentages add to more than 100% because students could select more than one race/ethnicity.
20% of students who reported struggling to learn how to use new EdTech in their courses

Data from 2021 CIN EdTech Student Survey
of students who reported that keeping up with all the new EdTech in courses is difficult

Data from 2021 CIN EdTech Student Survey
In what ways can this impact students’ learning experiences?
Students who report that they struggled to learn how to use EdTech in their courses were also...

... **less likely** to report that EdTech enhanced their learning experience during the academic year.

... **less likely** to report that they are learning the course material effectively in an online learning environment.

... **more likely** to report that they feel less connected to their peers in an online learning environment.

... **more likely** to report that they would consider not enrolling for 2021–22 if their courses were to be fully online.

*Data from 2021 CIN EdTech Student Survey*
Overall...

56% of students agreeing that EdTech enhanced their learning experience

52% of students agreeing that they are learning effectively online

53% of students agreeing that they feel academically prepared for next year

Data from 2021 CIN EdTech Student Survey
but ... Students at institutions who specialize in online instruction report better learning experiences with EdTech.
Why might we be observing these differences across institution types?
1. Students who are more comfortable with EdTech may self-select into online programs

2. Online-based institutions may be better equipped to provide a more streamlined learning experience

3. Faculty at online institutions may have higher EdTech self-efficacy
Mark

- University transitioned to remote in 2020
- Uses consistent LMS across courses
- Taking four classes: (1) each using different EdTech programs, and (2) each has different class cadence

What is Mark’s experience with EdTech and online learning?
Ariel

- Attends fully online university
- Uses consistent LMS across courses
- Taking four classes: (1) all use same EdTech programs, and (2) class has standard organization and clear expectations

How might Ariel’s experience differ from Mark’s?
In Fall 2021 we surveyed CIN faculty about EdTech...

402 Faculty respondents
8 Teaching institutions

60 Percent part-time faculty
66 Percent identifying as female

Early results – report being published in April 2022

Data from 2022 CIN EdTech Faculty Survey
Faculty EdTech Self-Efficacy

“I struggle to integrate EdTech into my courses”

14% Online College
18% 2-Year College
28% 4-Year College

Data from 2022 CIN EdTech Faculty Survey
Faculty EdTech Self-Efficacy

“I feel confident in my ability to teach in online environments”

95% 84% 77%
Online College 2-Year College 4-Year College

Data from 2022 CIN EdTech Faculty Survey
Faculty EdTech Self-Efficacy

“I am rewarded by my department or college for using EdTech in my courses.”

25% Online College

18% 2-Year College

12% 4-Year College

Data from 2022 CIN EdTech Faculty Survey
Key Take-Aways...

1. Equal access to EdTech =/= equal learning experiences with EdTech and online learning → EdTech self-efficacy important variable.

2. Online-based institutions appeared to provide more positive online learning experiences than traditional institutions in 2020-21.

3. Faculty need support to better use EdTech in ways that enhance their teaching and students’ learning experiences.
What can we do to help close the new digital divide?
For Faculty...

Understand your students’ experiences with EdTech

• Survey students at the beginning of the course
• Know what access issues your students have
• Address concerns or gaps early
• Start with low-stakes tech-based assignments to build skills early

Address the dual learning of EdTech and course content

• Integrate EdTech learning into your course design
• Have variable options for students with access issues or different levels of experience
• Provide feedback early and often
• Be proactive about tech learning
For Admin & Leaders...

Provide faculty support for using EdTech in enhancing & innovative ways

- Create systems of support for faculty to share new insights
- Promote a culture of teaching innovation and collaboration
- Provide both time and training for faculty to use EdTech

Give faculty a voice in EdTech decisions and listen to what they need

- EdTech decisions are made by admin, but faculty are using it
- Create a culture of learning from faculty about their EdTech needs
- Annual surveys of faculty to identify needs and gaps
The New Digital Divide: How EdTech Self-Efficacy is Shaping the Online Student Learning Experience in Higher Ed

College Innovation Network EdTech Student Survey

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Visit www.wgulabs.org/cin to learn more about the work we’re doing within the College Innovation Network

Faculty EdTech Survey report coming in April 2022