



wgu labs

# Solving Higher Education's **Wicked Problems**

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WGU LABS END OF YEAR IMPACT REPORT  
DECEMBER 2022



# About WGU Labs

**WGU Labs is the nonprofit innovation arm of Western Governors University (WGU) where our mission is to identify and support scalable solutions that address the biggest challenges in education today.**

**OUR VISION:** We seek an education ecosystem that provides universal access to meaningful learning experiences that enrich individuals economically, intellectually, emotionally, and socially. WGU Labs examines, invents, builds, and enables innovative education solutions that multiply the effects of WGU's mission to have a transformative impact on higher education and learners everywhere.

CAN IT BE TRANSFORMATIVE?

CAN IT SCALE?

IS IT STUDENT-CENTERED?

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## WGU Labs by the Numbers

Worked with

**14**

Higher education institutions

Worked with

**23**

EdTech companies

**13**

Research engagements

**\$2.275  
million**

Invested in EdTech startups

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# WHY we're tackling higher education's wicked problems

**THE WGU LABS MANDATE** is intentionally broad. Our founding organization – Western Governors University – has spent the last 25 years reimagining the higher education model to meet the demands of learners and the economy. The goal for change in the next 25 years is equally ambitious.

**WGU Labs was formed to be an innovation engine driving transformation in higher education. Nothing less. Because higher education is due for a shake up.**

- Public perception of higher education is wavering: [barely more than half \(51 percent\)](#) think a college degree is the way to get ahead.
- Higher education isn't delivering for many students: [3 in 5 students](#) who enroll in a four year degree spend time, probably accrue debt, and don't get a degree within 8 years.
- Students are seeking career-aligned credentials elsewhere with [220 million learners](#) using Massive Open Online Courses (MOOCs) in 2021, and [non-academic providers offering 549,712 badges](#), course completion certificates, licenses, certifications, and apprenticeships.

Together, these trends have created a sustainability crisis for critical sectors of higher education in which silver bullets and simple solutions are off the table.

At WGU Labs, we see these challenges as systemic and interconnected. To tackle them, we have built a cross functional team with broad expertise that enables us to create specific solutions to systems-level problems. We also define our work through a set of Wicked Problems; issues that are central to our understanding of the challenges and opportunities for higher education, and the lens through which our team of educators, learning designers, education technology experts, and researchers consider potential solutions in the education technology sector and marketplace, solutions in learning design, and solutions in policy.

This report highlights our collective progress toward achieving our vision.



## *Preparation and Access to Postsecondary Education*

#1

Routes and entry points to postsecondary education **unnecessarily limit access** for individuals who do not match the historic student profile.

#2

**Lack of transparency** around postsecondary education costs and financial support impedes access and opportunity, especially for historically underserved student populations.



## *The Learning Experience*

#3

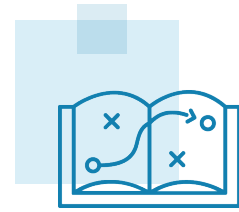
The design of curriculum, instruction, support systems, and organization do not reflect known principles of **social psychology** and their impact on learning.

#4

Technology-enabled learning models have not fully harnessed what is known about the **science of learning**.

#5

Diversity of instruction and learning pathways do not reflect the **diversity of learners**.



## *The Leap From Learning To Opportunity*

#6

The transition from learning to work is **opaque to students and employers**, and prone to leaks.

#7

Higher Education is not structured to support **continuous work-learn cycles** that are required in the modern workforce.



# #1 Postsecondary Access



*Routes and entry points to postsecondary education unnecessarily limit access for individuals who do not match the historic student profile.*

## WHY THIS WICKED PROBLEM

A college degree or other postsecondary education has increasingly become the entry ticket to middle class employment as the [majority](#) of well-paying jobs require at least some form of education beyond high school. Despite the importance of postsecondary education, entry points to higher education remain difficult to navigate, disproportionately [inhibiting access](#) for historically underserved and marginalized student populations.

The reasons for this are many: inequitable K12 experiences, complicated application processes, high cost of college attendance, ineffectual

advising supports, and a lack of information are just some examples of barriers that students must overcome to attend college.

Dramatically expanding access to higher education will require innovating and reimagining how students experience college. Labs' efforts in this space involve deep mixed-methods research to understand where, how, and why inequity occurs when accessing postsecondary options, developing new student advising platforms that promote equity, and reimagining the college application process.

## PREDICTIONS FOR 2023

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In order to meet the needs of new learner populations and increase access to flexible learning environments, we predict the rise of instructional designers as important purveyors of insight about the way students access and absorb tech-enabled content. These

insights will have significant implications on where and how students access their learning content, with a likely increase in open learning content, educational resources, and courses.

## PROJECTS AND PROGRESS SPOTLIGHT

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### EQUITY AUDITS

- **About:** WGU Labs conducted two institutional equity audits that sought to understand the systems and processes that lead to inequitable academic outcomes for underserved student groups.
- **Insight:** Students' racial and ethnic identities play a significant, yet complicated role, in students' experience across their educational journey. Ignoring the role of students' racial and ethnic identity can inhibit progress toward an equitable higher education.



- **About:** WGU Labs invested in Concourse Global, an online platform where universities apply for students, and engaged in research to explore drivers of engagement and impacts on the admission process.
- **Insight:** As of October 2022, Concourse had 125 colleges on the platform, demonstrating the growth of direct admissions across the sector.

### MajorClarity

- **About:** WGU Labs invested in MajorClarity, which allows students to “test drive” career options to increase the likelihood of finding the right post-secondary path, and conducted research on platform usage at Chesterfield County Public Schools.
- **Insight:** Middle school students appeared interested in exploring career pathways, with 54% returning after initial usage.

***“LONG TERM, we will need to broaden the field of vision beyond the point of access to also understand what leads people to, or steers them away from, higher education, and think critically about what higher education looks like for all students after they enroll.”***

***– Betheny Gross, director of research at WGU Labs***

# Financial Aid



*Lack of transparency around postsecondary education costs and financial support impedes access and opportunity, especially for historically underserved student populations.*

## WHY THIS WICKED PROBLEM

The [average cost of college attendance](#) in the United States has grown at an annual rate of 6.8%, resulting in a doubling of costs in the last 20 years. The sticker price of college attendance can discourage students from applying, despite the fact that the average net price of attendance is [50-75%](#) lower after scholarships and financial aid. And financial burdens continue after graduation: half of bachelor degree recipients have college debt, with an [average debt](#) level of \$28,000.

When it comes to financially supporting students, our systems can be burdensome.

Students must navigate complex bureaucratic processes and fine print to procure loans, emergency aid, and other financial resources. This creates high barriers, especially for those who are historically under-resourced and first-generation.

The opportunities afforded by higher education are only possible if students have the financial support. WGU Labs has been targeting solutions to innovate on financial aid delivery and expanding the postsecondary pathways available to students.



## PREDICTIONS FOR 2023

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The federal government is unlikely to ever offer emergency aid at the scale we saw during the pandemic but interest in alternative models of financial support remains high. Researchers and institutions will continue to try to understand the need for, and how to, efficiently dispense aid to students who are caught between paying essential bills and staying in school. Employers, who are looking for

ways to both upskill and retain employees, will play an increasing role supporting learners financially, and institutions will need to better understand what that means for their students, their programs, and their relationship to these employers. Finally, we expect conversations about how to better structure aid for individuals who are interested in short-term certificates and microcredentials to gain steam this year.

## PROJECTS AND PROGRESS SPOTLIGHT

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### FUNDING U

- **About:** The Accelerator invested in Funding U, which provides “last gap” microloans ranging from \$3,000 to \$10,000 to low-income students.
- **Insight:** Students face numerous challenges identifying, applying for, and securing loans needed to pursue higher education.

### EMERGENCY AID

- **About:** In collaboration with WGU Financial Aid, Labs analyzed the impact of three waves of emergency aid distributions on students’ persistence and progress.
- **Insight:** Funded students reported increased connection to, and support from, WGU.

***“IT’S CRUCIAL that students are getting a good return on their investment from institutions, and greater transparency of decision-making and innovative financial models are steps toward achieving that future.”***

***– Jason Levin, executive director at WGU Labs***

# Student Belonging

# #3



*The design of curriculum, instruction, support systems, and organization do not reflect known principles of social psychology and their impact on learning*

## WHY THIS WICKED PROBLEM

Humans are excellent learners and, specifically, social learners. For example, academic success spreads through [friendship networks](#) on campus. Instructors can [positively impact](#) the effectiveness of asynchronous learning. Students are more likely to persist when they have [close connections](#) on campus and feel a strong [sense of belonging](#).

However, we are just beginning to fully understand and appreciate how the social and psychological components of a higher education experience impact learning. Moreover, we are still grappling with how to apply what we know, particularly in online or hybrid learning modalities.

WGU Labs' efforts in this space have focused on leveraging social psychological principles in the design of the student experience. Our EdTech investments and development projects aim to provide students consistent support throughout their learning, and help students better navigate the support systems available to them from their institutions. We're also collaborating with other institutions and spearheading research to extract actionable insights to boost student belonging and promote positive student outcomes.

## PREDICTIONS FOR 2023

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Research shows the critical role that social belonging plays in student motivation, performance, and persistence. However, as learners demand more flexible learning, belonging is increasingly more complex to measure and sustain. In response, colleges must better understand the role of belonging to attract and retain their students. Three dimensions will be most salient for institutions:

(1) understanding if they are (or how they could be) creating inclusive learning environments that foster belonging; (2) leveraging technology-enabled solutions that connect students with their learning needs and each other in a meaningful way; and (3) training and supporting faculty and student-facing staff to sustain students' sense of connection and belonging.

## PROJECTS AND PROGRESS SPOTLIGHT

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- **About:** CIN, a grant funded, research-oriented initiative, worked with 12+ institutions to understand the best solutions to ensure student belonging, engagement, and equity.
- **Insight:** The recent shift to technology-enabled education exposed the importance of student belonging for success in higher education, but technology can also be the solution to help get students connected.

- **About:** The Navigate U™ platform, a Labs-built product, quickly connects students to college resources via an intuitive and accessible navigation experience.
- **Insight:** Students encounter several obstacles when searching for resources. Search systems are inefficient, complex, and static.

## boost

- **About:** WGU Labs invested in Boost, an LMS-based nudging solution, and examined K12 student district data on course performance while using the platform.
- **Insight:** Though we did not detect effects on course outcomes, 61% of students completing the survey reported that they would use Boost again and found Boost useful.

***“WHEN STUDENTS feel that they have a place that accepts them, values them, and looks forward to seeing them, they are more likely to persist at their institution, and in addition they benefit from greater engagement and better well-being. In short: belonging matters.”***

**– Omid Fotuhi, director of learning innovation at WGU Labs**

# Tech-Enabled Learning



*Technology-enabled learning models have not fully harnessed what is known about the science of learning.*

## WHY THIS WICKED PROBLEM

Learning is more tech-enabled than at any point in higher education's history, with more than half of students taking at least one online course. Despite recent shifts to this learning modal, much of higher education utilizes legacy practices that may be less effective in achieving learning outcomes.

Decades of learning science research show that active, engaged learning is superior to passive and reactive teaching for improving

student outcomes and closing equity gaps for historically marginalized student populations.

WGU Labs believes that the answer to this challenge is integrating principles of learning science, such as multimedia content integration, problem-based learning, and competency-based mastery into tech-enabled learning models that are increasingly self paced and self directed.

## PREDICTIONS FOR 2023

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In response to the increased student demand for flexible and mixed learning modalities, we predict the emergence of digital tool management as a way of helping institutions (1) focus on the most impactful technologies by uncovering their students' needs,

(2) have reliable and systematic process for learning about emerging technological domains and solutions; and (3) develop multi-year roadmaps for layering and connecting relevant EdTech solutions rapidly and effectively.

## PROJECTS AND PROGRESS SPOTLIGHT

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- **About:** WGU Labs invested in Red Flag Mania, a game-based experiential learning platform, and examined how gamified learning impacted student engagement and ethics positioning.
- **Insight:** Gamification may be an effective method to increase student engagement in courses facing persistent struggles for student attention.



- **About:** WGU Labs partnered with SOC, which offers experiential learning at scale, to understand how this model could be designed and implemented with competency based projects.
- **Insight:** Experiential learning can help students gain confidence in their abilities as self-directed learners and inspire them to advance in their own careers.



- **About:** WGU Labs invested in Peerceptiv, a peer feedback-based learning platform, and examined how peer feedback impacted skills acquisition for 143 University of Virginia students.
- **Insight:** Student participants gained collaboration and communication skills, highly sought after in the current workforce.

***“MOST EDTECH INVESTMENTS are based only on capital returns. Our Accelerator invests primarily on student impact – how are the products we’re helping develop going to have a real, measurable impact on student outcomes? That’s what we’re focused on.”***

***– Brad Bernatek, managing director  
of the Accelerator at WGU Labs***



# #5

## Diverse Learning Pathways



*Diversity of instruction and learning pathways do not reflect the diversity of learners.*

### WHY THIS WICKED PROBLEM

Enrollment in higher education has [more than doubled](#) in the last 50 years. And higher education today not only serves more learners, but a more diverse population of learners than any time in its history. Since the 1970s, racial and ethnic minority student populations on campus have [nearly tripled](#). Adults over the age of 25 years represent [nearly 8 million](#) learners enrolled in higher education. And [nearly 1 in 5 students](#) enrolled have a disability.

Unfortunately, many of the instructional practices and learning pathways common in higher education are legacies of historic models that were exclusionary to the many

types of learners who now make up our student populations. One outcome is that [historically marginalized](#) and [underserved](#) students are less likely to graduate and reap the benefits of higher education.

WGU Labs is developing and supporting instructional models and learning pathways that serve the diversity of learners in our postsecondary education system. This means ensuring that our work is inclusive to the diverse students we aim to serve, and making available a variety of pathways to opportunity.

## PREDICTIONS FOR 2023

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We believe that in the upcoming year, competency-based education (CBE) will finally be fully recognized as a central solution to making college ROI clear, improving workforce-alignment, flexibility, skills

acquisition, and alleviating workforce shortages. Now is truly the moment for a refreshed educational delivery model that aligns what we know about learning science with what the marketplace demands.

## PROJECTS AND PROGRESS SPOTLIGHT

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### NURSING EDUCATION

- **About:** In response to new nursing education industry requirements, WGU Labs developed a CBE transformation offering to assist nursing programs in shifting to the CBE curriculum model.
- **Insight:** CBE is an approach to learning design that must be uniquely adapted to each program.



- **About:** BHLI, a training organization, partnered with Labs to create a 16-week healthcare leadership career pathways course for high school students.
- **Insight:** Increased representation of historically minoritized groups can be achieved through intensive career development.

### HYBRID COLLEGE PROJECT

- **About:** WGU Labs is partnering with hybrid colleges (local organizations that offer place-based support for students enrolled in online institutions), to enroll and support students into four WGU College of Information Technology (COIT) programs.
- **Insight:** The self-paced, independent nature of online programs can require greater student support from mentors.

***“IN OUR WORK partnering with organizations on various learning design initiatives, step one is engaging the populations we hope to serve. Building a deep sense of empathy is critical as we conduct user-centered research.”***

***– Jess Stokes, director at WGU Labs***

# Learning-to-Work Transition

# #6



*The transition from learning to work is opaque to students and employers, and prone to leaks.*

## WHY THIS WICKED PROBLEM

[Seventy-four percent](#) of young adults want to learn skills that will prepare them for in-demand jobs in the future, however, many struggle in the transition from graduation to a fulfilling, well-paid career. Recent data shows that [41.3% of college graduates are underemployed](#) and working at jobs with fewer prospects and lower wages than the careers they hope a college degree would offer. The rate of underemployment is even [more severe for Black and Hispanic workers](#).

On the employer side, many managers claim [recent graduates lack both](#) the soft and hard skills needed for entry level positions. Meanwhile, a national debate on the purpose and ROI of college continues, with many

questioning the [value of attendance](#), and others [pitting career-readiness against broader life navigation](#) abilities.

WGU Labs believes that higher education can be reformulated to provide learning experiences that help students achieve both work and life goals. Doing so, however, will require unmooring long standing traditions and norms in higher education to prioritize inclusivity over exclusivity, provide more diverse pathways through learning, stop positioning career preparation in competition with intellectual development, and imagine that postgraduate study can and should be career-long (if not life long) and include opportunities other than masters degrees and PhDs.

## PREDICTIONS FOR 2023

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As the college ROI conversation continues to dominate national channels, we believe that colleges and universities will invest more heavily in career

assistance resources for students, and increasingly embed them within the core learning experience.

## PROJECTS AND PROGRESS SPOTLIGHT

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- **About:** WGU Labs invested in CareerDash, an online sales and recruiting bootcamp provider, and is examining student personas and workforce skills alignment within the program.
- **Insight:** Short term online training can be incredibly effective if designed with diverse students in mind and good job attainment as the primary outcome.



- **About:** WGU Labs invested in Lloyd, a career advising platform, and studied the implementation of Lloyd across two Anderson University courses.
- **Insight:** Career advising is not a one-time meeting with an advisor; it must be a continuous and adaptive process to ensure students are getting the careers they want.



- **About:** WGU Labs invested in Protopia, an AI-based alumni engagement platform, and investigated the conditions that increased likelihood of student/alumni engagement.
- **Insight:** Alumni do not always know how they can help current students at their alma mater.

***“IF YOU HAVE a standard model of education that only works well for some, and not for others, then why do we have a standard model?”***

***– Scott Pulsipher, president of WGU***



# The Future of Learning



*Higher Education is not structured to support continuous work-learn cycles that are required in the modern workforce.*

## WHY THIS WICKED PROBLEM

In today's workforce, 57% of employees [want to upskill](#), with historically marginalized workers expressing the greatest interest in updating their professional skill sets. The results of upskilling are a boost in both [workplace productivity](#) and an average annual [income boost](#) of \$8,000. On the employer side, the needs are clear: experts predict that [by 2030 the talent shortage is expected to total a loss of \\$8.5 trillion](#) in the US alone.

Despite a strong demand from both employers and employees for continuing education, much of the higher education industry has struggled

to shift from traditional models to more flexible, user-driven offerings that better align with a modern workforce in need of lifelong learning options.

WGU Labs supports innovations that build accessible and impactful continuing education options for diverse workers. Labs also facilitates inquiry into the structural changes needed to adapt the learning experience to modern workforce needs, with the understanding that greater shifts are needed to prepare all learners for continued advancement.



## PREDICTIONS FOR 2023

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In 2023, we predict that higher education institutions will continue to diversify their offerings of microcredentials, short term certifications, and other flexible, workforce-oriented skills

acquisition programs in order to compete with industry certification and combat declining overall enrollments.

## PROJECTS AND PROGRESS SPOTLIGHT

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- **About:** Labs collaborated with WGU's Teachers College to develop an online community as part of WGU's new CEPL program.
- **Insight:** Professional learning communities offer continuous support, connection, identity and belonging that deepen learning experiences, support retention, and impact success.



- **About:** WGU Labs invested in GoCoach, a career development platform, and surveyed 600+ WGU students to gauge interest in career coaching.
- **Insight:** Of those who responded to the survey, 65% listed career navigation coaching as their top choice of potential coaching offers.

## WGU COACH

- **About:** WGU Coach is an internal training geared toward WGU Program Mentors to help them develop coaching skills in accordance with the International Coaching Federation's coaching competencies.
- **Insight:** Program Mentors have more successful conversations with WGU students when they utilize coaching skills to help students overcome non-academic barriers to their progress such as family, medical, or professional challenges.

***"AS THE PORTFOLIO of pathways through learning grows, we need to understand students' experiences in them, the outcomes achieved in them, who is well-served by them, and, critically, the institutional and financial models that will make them viable and scalable."***

***– Betheny Gross, director of research at WGU Labs***



**WGU LABS** is the nonprofit EdTech incubation, research, and design arm of Western Governors University (WGU) where our mission is to identify and support scalable solutions that address the biggest challenges in education today.

## Our Services

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### USER-CENTERED LEARNING DESIGN & TRAINING

Using equitable and process-driven design principles, we create engaging, active learning courses for a variety of learning needs.

### PRODUCT DEVELOPMENT

We invent learning products by leveraging user-centered design and applied learning science in service of client and marketplace needs.

### EDTECH INCUBATION

Startups within the WGU Labs Accelerator receive equity investments and strategic consulting services to activate their potential in the marketplace.

### RESEARCH & EVALUATION

WGU Labs' interdisciplinary researchers support partners with multimethod implementation, efficacy, and policy research.

### UNIVERSAL STUDENT SUCCESS CONSULTING

We build optimal environments for students from pre-college to career through equity audits, EdTech needs analysis, program analysis, and faculty training.

### IMPLEMENTATION SUPPORT

We support Higher Ed institutions and EdTech companies in needs analysis, selection, pilot development, and implementation of transformative educational solutions.

## Contact

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**LEARN, BUILD, &  
GROW WITH US.**

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