Toward Ending the Monolithic View of "Underrepresented Students": *Why Higher Education Must Account for Racial, Ethnic, and Economic Variations In Barriers to Equity*
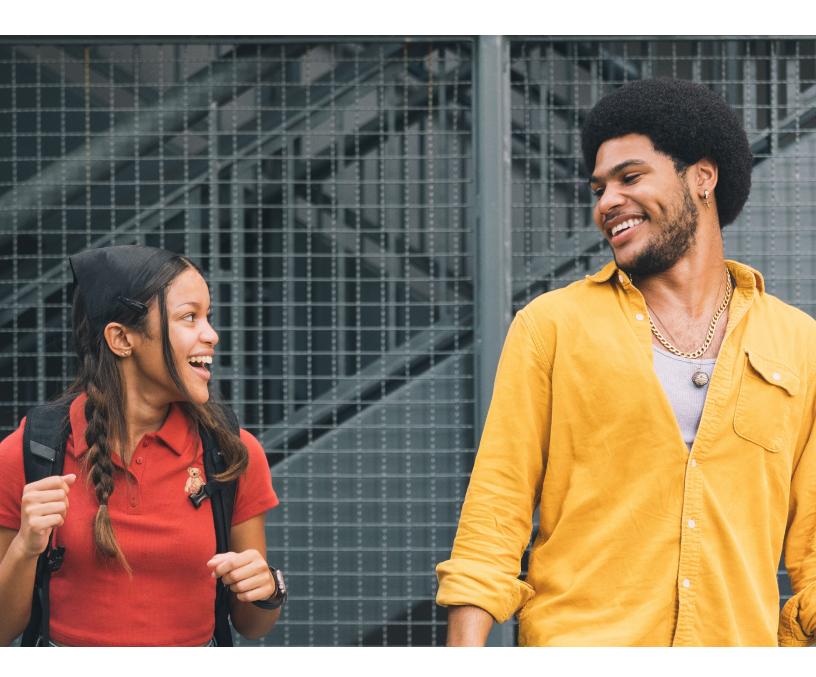
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"As a generic designation for African Americans, Latinos and Latinas, Asian Americans, Pacific Islanders, and American Indians, URM [underrepresented minority] represses the critical race questions that numeric data should elicit from the individuals who have normalized URM . . . . Reporting numeric data in the aggregate constitutes a malpractice as it hides significant inequalities across groups. URM promotes color-blindness; it contravenes the principle of critical race consciousness that is essential to achieving equity in higher education. URM blinds us to the monumental differences in the circumstances that turned Blacks, Hispanics, Asian Americans, and American Indians into URMs."[1]

- Estela Bensimon, "The Misbegotten URM as a Data Point"

" . . . we must not lose sight of the paradox that race is an ephemeral, elusive, imaginary construct. At the same time, race has real, profound, and lived consequences for students who are sorted across the different boxes. We are right to challenge the purpose and consequences of racial and ethnic categories, including their applicability to the students we serve. Going a step further, the field should seek to better understand how these categories intersect with other identities, such as class, gender, sexuality, country of origin, religion, and the differently abled (Crenshaw 1989). To achieve the goals of inclusive diversity and academic excellence, higher education institutions must of necessity compile the most reliable, comprehensive, informative data possible. When used critically and judiciously, data categorized by race and ethnicity can provide valuable information to help guide efforts to address persistent inequities in higher education."[2]

- American Council on Education, "Race and Ethnicity in Higher Education: A Status Report"

INTRODUCTION

Higher education in the United States has a tendency to treat all "underrepresented" students as a monolith in ways that are counterproductive to the cause of equity. Tables of educational data frequently aggregate Black, Latinx, Indigenous, Asian American and Pacific Islander people, along with many others who are racially or ethnically minoritized, into one cell representing all students of color. Often, poverty-affected and first-generation students are conflated with one another and then conflated again with race and ethnicity to create an even greater aggregation of data.

As a result, large student populations in U.S. colleges and universities are uncounted, invisible, or obscured in educational data about admissions, course-level outcomes, persistence, graduation, and career success. This data then informs strategic planning, operations, budgeting, support services, instructional design, teaching practices, research, commentary, and institutional culture. Where more specific racial and ethnic categories such as Black, Latinx, Indigenous, and Asian American and Pacific Islander do appear in educational data and discourse, they are homogenized in ways that hide meaningful variations within those groups.

While aggregated data about students is sometimes necessary to initiate analysis and discussion, this overreliance on aggregated data about all "underrepresented" or "disadvantaged" students leaves a critical gap in knowledge in U.S. higher education. Students must navigate a complex variety of barriers to equitable learning: They differ from one another in college-going knowledge, academic readiness, community support, informational access, financial resources, and technology access; they also bring values, perspectives, and goals that often are in tension with the values of institutions and academic culture. But policies, support programs, and teaching practices intended to address those barriers to equitable learning are limited by the tendency to treat all racially and ethnically minoritized, poverty-affected, and first-generation student populations as a monolith whose circumstances and needs are generally the same.

It should go without saying that they are not a monolith. They bring a range of strengths and assets to their learning journey, they encounter unique barriers, and they encounter similar barriers in unique ways. However, designing teaching and learning to account for those varied experiences has not been an embedded part of historically white U.S. colleges and universities, and there has been little disaggregated data available to inform or support efforts to redress this.

Expert insights

Eeman Uddin, a sophomore at Georgia Institute of Technology majoring in biomedical engineering, is an observant Muslim. She was raised by a single mother who emigrated from Pakistan and, contrary to the assumptions of almost everyone she meets, identifies not as Middle Eastern but as Asian American. That puts her statistically with 22 million Americans with heritage based in more than 20 countries including China, the Philippines, Singapore, India, and Hawai'i.[3]

"Most of the time people see a headscarf and assume I'm Arab," Uddin says. "Everyone thinks I speak fluent Arabic or don't have English as my first language. It's different having to talk about your identity and make sure people know Asian looks like a lot of things."

This gap extends to the planning and implementation of digital learning, which is a steadily growing part of the student experience. While digital learning has the potential to reduce equity gaps, without careful data-driven instructional design and implementation, it can just as easily reproduce, extend, amplify, or exacerbate barriers to equity.

Confronting and moving past the overreliance on data and discourse about all "underrepresented" students is essential to advancing conversations about equity and creating practical, data-informed solutions. Every Learner Everywhere shares the vision many educators have of care-centered, assets-based learning environments where every student's unique needs, challenges, and strengths are fully comprehended and accounted for by flexible policies and impactful pedagogies. No student should experience a barrier to learning and academic and professional success because a facet of their identity is in conflict with their institution's practices.

With this in mind, Every Learner Everywhere set out to develop a report on how barriers to equity in digital learning differ across racial, ethnic, and economic backgrounds. During an extensive literature scan, we observed that:

- Many reports that are characterized as disaggregated by race and/or ethnicity sort data between white and Black students, between white and all minoritized students, or between white, Black, and other minoritized students.

> *No student should experience a barrier to learning and academic and professional success because a facet of their identity is in conflict with their institution's practices.*

- A small number of sources disaggregate data by additional racial and ethnic groups, such as Hispanic and Asian American. However, that still blurs the enormous diversity within those groups. Some excellent research and commentary explicate that intergroup diversity, but they usually stand independently and don't enable a comparative analysis with other racial, ethnic, and economic groups.

- Even when data about minoritized students is disaggregated, Indigenous students in U.S. higher education rarely appear in data outside of tribal colleges and universities (TCUs). At predominantly white institutions (PWIs), Indigenous students are often represented in data by asterisks because of small sample sizes.[4]

- Studies, reports, and other publications about higher education tend to limit their attention to baccalaureate programs or four-year colleges and don't include associate's or certificate programs or two-year colleges, effectively leaving out significant populations of minoritized, poverty-affected, and first-generation students.

- Aggregation isn't a problem limited to higher education. Data about pre-primary and K-12 education and about the workforce is similarly constrained. For example, data on "students from low-income districts" is often used as a proxy for discussions of all minoritized students, and studies on diversity in the workforce frequently aggregate race, ethnicity, and gender.

- The effect of teaching practices in the classroom and online are especially difficult to illuminate with data. Most data about U.S. college students describe K-12 achievement, admissions, degree attainment, and employment outcomes — the inputs and outputs. What happens between admissions and graduation day is a "black box," as the authors of a literature review on targeted population-specific digital learning design noted.[5] We found it is uncommon to disaggregate data

about course-level or program-level learning outcomes.

- While disaggregated data about barriers to equity in higher education is limited, it isn't completely nonexistent. For example, institutions using the Equity Scorecard from the University of Southern California Center for Urban Education may have systems in place for evaluating disaggregated data.[6] The Appendix to this report recommends similar practical tools and resources, as well as some of the excellent publications and capacity-building projects that are moving conversations about disaggregated data forward.

To make progress on equity, educators and institutional leaders must be able to see and examine the patterns of lived experience among people in specific student populations along with hearing how every student's experience is unique. Higher education needs systems, policies, and practices that are both informed by disaggregated data and finely tuned to the needs of individual students. Institutions, faculty, and staff must build capacity for collecting, analyzing, and using disaggregated and localized data, while also making space to learn from students about how they bring specific facets of their identities to learning. In short, to create equity, higher education needs to develop the capacity to learn from a blend of richer student data and richer student stories.

This report, *Toward Ending the Monolithic View of "Underrepresented Students": Why Higher Education Must Account for Racial, Ethnic, and Economic Variations in Barriers to Equity,* synthesizes commentary, research, and programmatic activity on how higher education has so far grappled with disaggregating and using student data to confront and close equity gaps for particular student populations. It is complemented by original interviews with 17 experts, including faculty, administrators, researchers, advocates, and students. (One of the guiding principles of Every Learner Everywhere is that the lived experiences of minoritized and poverty-affected students make them equity experts.)

Based on the mission and priorities of Every Learner Everywhere, we sought evidence-based insight into how barriers to equity vary for six particular populations of interest among college and university students in the U.S.: Black, Latinx, Indigenous, Asian American and Pacific Islander, poverty affected, and first generation. While students encounter barriers to equity based on many other

Expert insights

Mark Lannaman is a graduate student in global media and cultures and recently graduated from Georgia State University with a degree in journalism. He identifies as Black and Latinx and, though his family has prospered, he is often asked to represent the perspective of poverty-affected Black students.

"There are going to be certain obstacles I'll face inherently because of my race," Lannaman says, "but poverty has not been one of them. For some people, I'm their liaison to the world of poverty, when I have no connection to it. People assume your background as poverty stricken. While my family has humble beginnings, my family's story is a story of triumph and I've grown up not being poor because of it. So me, personally, while I also hope for a story of triumph, it's not in the same way because poverty wasn't an obstacle for me."

Zaire McMican attended a diverse Newark, New Jersey high school where his mixed Black and Panamanian heritage wasn't uncommon. For college, he moved to North Carolina near his father, completing an associate's degree at Central Carolina Community College, and he is now a residential student in business at University of North Carolina at Greensboro.

McMican appreciated the counseling services he accessed at his first institution, because he struggled with the culture shock of a predominantly white environment. At UNC Greensboro, he says, "There are student groups led by minoritized individuals, which are very helpful. There's a Latinx club. The Black student body helps each other out. This school does a good job making sure everyone feels supported and that they can engage with educators."

One kind of support system McMican doesn't access, however, is for first-generation students. His father and stepmother are both college graduates and both work in higher education. "It's definitely something I've greatly benefited from," he says. "I see peers who don't know what to do filing for financial aid and figuring out how to schedule classes and advising. I've definitely been privileged to have folks who understand how higher education works now, whereas some of my friends from high school don't know what to do in college."

facets of their identities, those groups are foregrounded in the illustrations, data, and conversation to follow.

Toward Ending the Monolithic View of "Underrepresented Students" is organized into two parts:

- Part 1: Why and How Accounting for Variations in Student Populations Matters for Equity

- Part 2: What Works To Remove Barriers to Equity for Unique Populations

Interwoven into those parts are sections with background and related information including:

- the history and context of these racial, ethnic, and economic categories;

- the various ways first generation is defined;

- how historically Black colleges and universities (HBCUs) and TCUs provide models for equity-centered institutional culture;

- exemplar programs; and

- resources and tools for creating equity-centered educational institutions.

The Appendix details where disaggregated student data does exist and provides a sampling of how that data could create more precise profiles of racially and ethnically minoritized students.

Though this report argues for the need to balance disaggregated and localized data with making space to hear how students bring specific facets of their identities to learning, it doesn't offer a comprehensive methodology for doing so. Rather, this is a status report on the commentary, research, and activity toward ending the monolithic view of the so-called "underrepresented student." It tries to specify and illustrate why breaking apart the monolithic view of those students matters, and how doing so could advance high-level conversation about equity and learning.

Acknowledgments

- **Danielle Leek, Ph.D**., is Dean of Online Learning and Instructional Excellence at J. Sargeant Reynolds Community College in Virginia and an Instructor in the master's program in communication at Johns Hopkins University.

- **Cindy Lopez** is Executive Director, Network Engagement at Achieving the Dream. Previously she was Director of Tribal College and University Programs.

- **Zaire McMican** is a business major at University of North Carolina Greensboro, and he has an Associate of Arts degree from Central Carolina Community College.

- **Erica Moore, Ph.D.**, is Executive Director of Native Student Success at The American Indian Higher Education Consortium.

- **Renee Restivo Rivera** is majoring in health information technology at Northwestern Connecticut Community College.[7]

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Preface

Toward Ending the Monolithic View of "Underrepresented Students": Why Higher Education Must Account for Racial, Ethnic, and Economic Variations in Barriers to Equity results from an effort that Every Learner Everywhere embarked on in November 2021 with the goal of drawing on data and insights from students and other experts to paint vivid pictures of the experiences of Black, Latinx, Indigenous, Asian American and Pacific Islander, poverty-affected, and first-generation students. We asked what happens when these different groups of students enter college classrooms; meet with faculty in office hours; open a textbook in the campus library; log in to the learning management system from dorm rooms to review the syllabus; engage in class meetings on video conferencing platforms from parking lots and coffee shops; or work on digital courseware from kitchen tables. Are the barriers to equity they encounter in those moments uniquely different for each group? And, if so, what does that potentially mean for classroom practices, as well as for support services and institution-level policies?

Premises

It's past time for disaggregated data

One premise at the beginning of this project was — as Estela Bensimon argued in the address quoted in the epigraph on page 4 — that aggregating all underrepresented minorities into one set of data and one conversation is educational malpractice, as is bundling all so-called "underprivileged" students based on race, ethnicity, economic status, or other factors. Aggregation homogenizes extremely heterogeneous groups, erases their unique experiences, limits the perspective institutions and individual educators have on patterns of lived experience among different student populations, and reinforces inequities.

What do we mean by barriers to equity in higher education?

Barriers to equity can be unique to college classrooms or to online learning environments. They can be erected by institutional policies and culture. They can originate off campus or be the legacy of conditions created in the past. They can also be part of the culture at large and reinforced within institutions of higher education.

During our literature scan, the following barriers to equity were described by various sources for at least one group of students, if not most groups of racially or ethnically minoritized, poverty-affected, or first-generation students.

Social and economic

- Prejudice, hostile environments, and racist attacks

- Tensions between the norms and expectations of a student's family or home community and the norms and expectations of academia

- Cultural mismatch/culture shock

- Shame, imposter syndrome, and stereotype threat

- Racial battle fatigue

- Differences in access to social or structural resources such as transportation, childcare, and employment

- A racialized student debt crisis

Higher education creates and participates in systemic barriers to equity

Unquestioningly aggregating students centers dominant perspectives (i.e., Who is doing the underrepresenting?) and establishes deficit-based interpretations of student data. For example, discussions of "underrepresented students" tend to foreground their supposed lack of readiness for college, rather than the barriers to equity that higher education erects for them. They also overlook the strengths students have that could potentially contribute to their readiness.

Consequently, a second premise of this project was that when there is a pattern of groups of students having trouble making academic progress, the problem isn't the students; the problem is academic systems. In addition to the barriers to equity that higher education creates through its own culture and practices, it reinforces and compounds the impact of barriers that are created off campus, such as wealth gaps and housing insecurity. To take one example, many academic systems, policies, and practices are driven by assumptions about scheduling (semesters organized around 9-to-5 work days) that are incompatible with the way many students actually live their lives.

Equity requires proactive effort

A third premise of this project — and of all of Every Learner Everywhere's work — is that colleges and universities have a responsibility to proactively dismantle racism and other inequities. We reject so-called neutral or "colorblind" approaches that stop at inclusion. As *Getting Started With Equity: A Guide for Academic Department Leaders* explains, "Equity is giving everyone what they need to be successful. It is a form of justice that seeks to remove the institutional, ideological, interpersonal, and internalized barriers that prevent certain groups of people from thriving or from sharing power."[8]

Pre-college academics

- Ongoing informational barriers that begin in early childhood education and continue in college

- Racialized tracking that begins in early education and the historical segregation and resegregation of K-12 education

- Differences in experience with role models

- Differences in college-going knowledge and cultural capital

- Differences in academic preparation and pre-college opportunities, including access to advanced placement courses, college gateway courses such as advanced calculus, college prep programs, test prep programs, enriching digital learning experiences, early college, summer bridge programs, and travel

Institutional

- Differences in access to educational resources such as computer hardware, software, books, telecom services, counseling, mentoring, and tutoring

- Differences in access to study abroad programs, summer research projects, internships, service learning, and live-learn communities

- Ineffective communication inside colleges and universities about available support services and other resources

- "Colorblind" instructional design and course materials

- Inflexible term schedules and class meeting schedules

- Inflexible institutional policies around registration and financial aid

- Lack of support for multi-institutional trajectories

Racial and ethnic categories are dubious, yet meaningful

Another premise of this project is that, on one hand, objective definitions of the populations of interest in this project are elusive or highly contestable, while on the other hand, the subjective experience of a racist society creates commonalities among people who independently wouldn't necessarily identify as the same group. As the ACE report cited in the epigraph to this report notes, racial categories are imaginary constructs that have real consequences, and they must be both challenged and used critically.

As we'll see below, a recent immigrant from India and a third-generation descendant of immigrants from Japan may not identify themselves as part of the same racial or ethnic group. Nevertheless, American society and institutions, including higher ed, will often treat them as part of a collective "Asian" population. Individual students identifying variously as Mestizo/a, Chicano/a, Afro-Latino/a, Indigenous, or white may all be counted as Hispanic in data, hiding significant variations in educational outcomes.

Meanwhile, self-identification by individuals evolves along with the definitions presented to them by the U.S. Census and other agencies and educational institutions, making the data inherently unstable. For example, according to a National Center for Educational Statistics (NCES) literature review in 2018, "the categorization of American Indian and Alaska Native is the least stable self-identification. The racial/ethnic categories presented to a respondent, and the way in which the question is asked, can influence the response, especially for individuals who consider themselves of mixed race or ethnicity.[9]

Intersectional analysis requires data about specific populations

This project might appear to be in some degree of tension with intersectional analysis, which has as a goal avoiding organizing problems into "discrete challenges facing specific, mutually exclusive groups and thus requiring distinct solutions."[10] Intersectional analysis calls for considering multiple categories, while this project is trying to better understand individual categories hidden within the monolith of the "underrepresented" student.

We hope this project, by asking what the discrete challenges of specific (but not mutually exclusive) groups are, can be a step toward more impactful intersectional analysis. Whereas treating all "underrepresented" students as a monolith erases the differences among groups, we are attempting to make more vivid the sections of student populations that go into an intersectional analysis. For example, disaggregated data can show that the growing "gender gap" in educational attainment between women and men doesn't apply equally across all races and ethnicities: College-going women have higher high school GPAs on average than men, except in the American Indian and Alaska Natives student group.[11]

The challenge described here of limited disaggregated data is true also of data-informed intersectional analysis. For example, a 2020 literature review of Black first-generation students only found 10 articles since 2008. The authors note that "it is a challenge and a disservice to those populations when [dual Black and first-generation] identity is not specifically called out in the literature. An intentional focus on the unique experiences of Black first-generation college students will only bring nuance to existing research and university praxis."[12]

Productive challenges

The intended process at the start of the project was a comprehensive literature review about the populations of interest, followed by semi-structured interviews with numerous experts on our research questions, including students, higher education faculty, student affairs professionals, administrators, and leaders from advocacy and research organizations. We were especially interested in how the populations of interest uniquely encounter digital learning.

However, we encountered two "productive challenges" to our original plan as we worked.

One, despite the many years of educators calling for better disaggregation of student data, sufficient data does not yet exist to make a conclusive, evidence-based case for how digital learning can be used to reproduce, exacerbate, or reduce barriers to equity in unique ways for different student groups. However, the synthesis of what we did find, along with the original interviews, provided many intriguing glimmers. Everyone we spoke with — and much of the commentary we read — expressed confidence that different student populations encounter different barriers to equity and would benefit from tailored support, and they describe many provocative examples.

Two, the commentary we read and our interviews frequently revealed a tension between getting good data on populations of students and knowing students as individuals — between learning environments that are data driven and personalized. Educators know aggregating all "underrepresented" students is counterproductive, but they sometimes cautioned against fixating on the hunt for tables of data with more precise cells.

For example, no one disputes that the experiences of Latinx students are not necessarily the same as those of Black students. But many people we talked with were also quick to point out that the more finely tuned categories we could look at as we pulled apart the bundle are also highly contestable, i.e., the experiences of all Latinx students are not the same, nor are the definitions of terms like "Latinx" and "Black" fixed.

Between the 2000 and 2010 U.S. Censuses, an estimated 9.8 million Americans changed the race or ethnicity they identified as.[13]

As a result of this tension between accounting for groups and working with individuals, many educators and students expressed a desire to leapfrog over considering smaller sets of student data toward an ideal environment of treating students as individuals. We argue that leapfrogging over discussions of the unique experiences of Black, Latinx, Indigenous, Asian American and Pacific Islander, poverty-affected, and first-generation students would overlook how these categories have meaning or influence. There are patterns to the lived experience of specific student populations — patterns that, when illuminated, can inform equity efforts. Just as those patterns are lost by the bundling approach, so are they potentially lost by an exclusive emphasis on the individual student.

It is necessary to account for these specific racial, ethnic, and economic categories. But for individual students within those groups, the categories may not matter or may matter in unique ways. How can higher ed get away from the monolith of the underrepresented student and begin working with more meaningful data that illuminates differences instead of erasing them?

Antwan Jefferson, Associate Clinical Professor and Associate Dean for Equity, Diversity, and Inclusion in the School of Education and Human Development at University of Colorado Denver, says these categories "are somewhat inescapable, so we have to account for them. I don't think that means we have to rely on them. Accounting for them means recognizing that one size doesn't fit all. One label doesn't tell us a full story. Relying on them would mean that because this is your label, this is all you get, this is all you deserve, and this is what you have in common with others who have that label, which is not true."

While it is "resource heavy to tailor a learning experience for individual students," he says, "that is actually the aspirational work — that students will experience consistent expectations, but multiple pathways that are adaptable for them. This stuff is significant, but it's significant to the point that if we were being really courageous, we would want really tailored learning opportunities for students."

> *"One label doesn't tell us a full story. Relying on [labels] would mean that because this is your label, this is all you get, this is all you deserve, and this is what you have in common with others who have that label, which is not true."*
> *- Antwan Jefferson*

How we edit for equitable language

In this and other publications, Every Learner Everywhere uses the term *minoritized* to decenter the predominantly white perspective inherent in characterizations of racial and ethnic groups as minorities. We similarly avoid terms like *underrepresented* and *underprivileged* (or call them out with scare quotes as in the title of this report) to decenter the perspective of who is doing the representing and privileging. We use the term *poverty affected* to avoid the deficit framing of terms like *low income*.

Our own language differs sometimes from that of the sources in this research. Where the reader encounters in this report terms like *minority*, *people of color*, *underrepresented*, and *low income*, that is intended to convey an accurate summary of what a source has said or of a perspective that we are confronting.

For particular racial and ethnic groups, we use *Black, Latinx, Indigenous*, and *Asian American and Pacific Islander.* Where it is necessary to clarify what an original source is saying, we sometimes rely on their original use of terms like *Hispanic*, *Latino*, and *Native American*. Where a quoted source's capitalization style differs from ours, we edit into our style for consistency.

We try to avoid deficit-based language that uncritically presumes a lack. For example, in discussions of college readiness, we frame these as differences in readiness in hope of raising helpful questions about forms of readiness that may be overlooked. However, again, we necessarily default to deficit-based language when capturing the perspective of a source we're citing.

More about the language choices at Every Learner Everywhere can be found in *Equitable Language and Reframing: How We Think About Writing and Editing to Support Equity.*

Part 1: Why and How Accounting for Variations in Student Populations Matters for Equity

Illuminate intergroup heterogeneity

All the populations of interest in this project are extremely heterogeneous, which is a more significant factor in the student experience than is recognized in discourse about racially and ethnically minoritized and poverty-affected students. For example, depending on how the population is defined and surveyed, Asian American and Pacific Islanders may have heritage in Pakistan, China, Malaysia, Hawaiʻi, urban Japan, or rural Cambodia. They may be recent war refugees and part of communities who have recently experienced mass collective trauma, or they may be the great-grandchildren of immigrants to the U.S. They encompass a wide variety of cultural and language differences. Moreover, as we detail in the student population profiles in the Appendix, Asian American and Pacific Islanders have a greater range of outcomes in college readiness, degree attainment, and career outcomes than is usually recognized.

The institutional research offices of individual colleges and universities, as well as grant-making bodies, often count Asian American and Pacific Islanders as "non-underrepresented minorities" when they are a larger percentage of the student body than of the population as a whole. However, this overlooks how subpopulations of Asian American and Pacific Islander students vary in their degree progress, in the barriers they experience or in the supports they may need. It also overlooks the areas of academia (such as in ecology, to take one example[14]) where Asian American and Pacific Islanders participate at lower rates and are by no means "overrepresented."

A similar point about intergroup heterogeneity can be made about Black, Latinx, Indigenous, poverty-affected, and first-generation students. Each of the student populations of interest in this project varies in their needs, assets, and achievements more than is visible in aggregated data, and higher education tends to flatten their experiences.

Expert insights

- *"We don't treat white students as a monolith. We know students from Kentucky are not the same as students from L.A. But for some reason, that doesn't translate to Black and Brown students. Black and Brown are big categories. Black includes native-born American students, West Indian students, African students, expatriates from Europe. The conversation around Latinx folks is often collapsed into one immigrant experience, but their identities are far more complex than that." - Shonda Goward*

- *"Hispanics descended from Europeans can assimilate more versus Hispanics who look more Indigenous or Hispanics like me who are Black. Even the term 'Afro Latino' . . . If you're saying I'm Afro Latino, what does that make the default Latino?" - Mark Lannaman*

- *"There is a generalizable way we can talk about Native student success and obstacles, but we're not homogeneous. With Native students, we have to discuss the historical context of tribal communities, the placement and geographical location of the tribal communities that prevent access or proximity to higher education institutions. There's definitely going to be a difference for those who are residing in tribal communities." - Erica Moore*

- "When it comes to culture and racial ethnic backgrounds, sometimes there are majorities within the minorities, if that makes sense. People see a headscarf and assume you're part of a certain racial or ethnic group. That is a big mistake, because within religious groups there's a lot of diversity, and grouping all those students into one category takes away from the diversity and beauty of their identity." - Eeman Uddin

- "I'm originally from the Philippines, and my background is pretty different from someone who comes from China or Korea or Japan. I went to UCLA, and I saw Asian people, but they didn't have two parents working graveyard shifts. They were second- and third-generation UCLA students. That was my first exposure to what it means to aggregate communities and to the perception that it matters where you're coming from." - Elaine Villanueva Bernal

- "Sometimes we don't think about unique intersectional identities. For instance, about 60 percent of enrolled veterans are first generation. First-generation students are often more likely to work full time. They're also a sandwich generation, navigating supporting parents as well as their own children or younger siblings." - Sarah Whitley

Illuminate overlooked barriers to equity

Renee Restivo Rivera, a single mother of three teenagers, works as a bar manager. A felony drug conviction when she was a teenager makes it difficult to get better-paying jobs, something she hopes the associate's degree in health information management and social science she is completing at Northwestern Connecticut Community College will help with.

Restivo Rivera identifies as multiracial/multiethnic and has thrown herself into the leadership of the campus Students of Color Alliance. "I really took that to heart," she says. "I felt like we can make a difference with this. I'll be here for a couple more years, and then I'm gone. I want to see a change for the future students."

But she says her limited income and the scheduling conflicts between work and school are bigger factors limiting her progress than her ethnicity. One unanticipated barrier to success was a professor's expectation that she print an assignment sheet to complete it. The campus library has printers available, but not when she was able to get to them, because of her work schedule.

> *Restivo Rivera identifies as multiracial/ multiethnic and has thrown herself into the leadership of the campus Students of Color Alliance. "I really took that to heart," she says. "I felt like we can make a difference with this. I'll be here for a couple more years, and then I'm gone. I want to see a change for the future students."*

Another example was the instructor-led study sessions held outside the scheduled class hours. Restivo Rivera habitually selects courses and arranges her work schedule before the start of the term to avoid conflicts, but she didn't know about the study sessions in advance and had to miss them. It turned out critical information for final exams was given out during those sessions.

Restivo Rivera's enthusiasm for college is enormous, and she dreams of continuing to earn a bachelor's degree, but she used up her federal financial aid eligibility during an earlier attempt at college when she was a teen mother. This time, she is paying mostly out of her own earnings with little financial aid. "I have to cut tuition down into four payments," she explains. "It's January 1, February 1, March 1, April 1. I have a credit card. I've been working on my credit. But it's a lot of money to come up with."

Jennine Wilson is also close to completing her program, a health information management degree at Indian River State College in Florida, but asthma and other health issues have been a big factor in her academic progress. At age 51, she was eager to finish last semester, and she put five courses on her schedule, including a clinical — probably too much, she admits.

An issue with Wilson's health re-emerged early last semester and, "the minute I found out, I immediately ran to my professors in health information management," she says. "I've been with these ladies for two years, and they rock. They are so supportive, so understanding, and have helped me, requiring me to do just my quizzes and my finals."

Another instructor outside her major, however, hasn't been as accommodating, and Wilson failed the last general ed requirement, pushing off her graduation date. "She wants me to do absolutely every single last thing in the module. I've said to her, 'I'm not going to pass your class, because you're not being compassionate or having any empathy for my circumstances, and that's a problem for me. I'm going to have to take this class over." Wilson also wonders if the instructor would be more flexible with her if she weren't Black.

Students like Restivo Rivera and Wilson navigate complex systems of challenges that a label of "underrepresented minority" doesn't begin to explain; nor do more precise labels of Hispanic, Latinx, or Black. Higher education must develop the capacity to capture both disaggregated data and the individual stories that make the impact of barriers to equity less abstract.

Some of those barriers may be familiar, such as prejudice, access gaps, work and schedule conflicts, and food and housing insecurity. Disaggregation potentially reveals how they are experienced by specific populations. Likewise, better student data can reveal the variations in student experiences that may not often be examined broadly, such as age, carceral experience, immigration status, marital status, caregiver status, health status, dependent versus independent status,[15] and region.

What is a first-generation student?

Definitions of first-generation college students are almost as ubiquitous as the programs designed to support them, and, depending on who is counting, first generation can include between 22 and 77 percent of U.S. college students.[16]

For example, an NCES research brief defines first-generation students as when neither parent or guardian attended college at all.[17] In contrast, a landscape analysis by the Center for First-Generation Student Success found that the most common definition was a broadly inclusive one based on a parent obtaining a four-year degree.[18] In that case, students with a parent who has some college but no degree, or a parent who earned an associate's degree, would be first generation.

Another common approach is no definition at all. In the Center's survey, 73 percent of respondents said their institution has a formal definition of first generation, but 12 percent were unsure. Even where a definition is established, it may not be consistently applied across all programs. A recent case of the University of Pennsylvania suing a student for fraud hinged on whether multiple supports and scholarships offered to her had consistent definitions and whether the relevant family member was her birth mother or her foster parents.[19]

That case highlights how students are in a position of identifying themselves as first generation, a term they are unlikely to encounter outside of a higher education context. They may be reluctant to highlight their differences from supposedly "typical" students. Others may not recognize themselves in the term or will assume they can't be first generation if an older sibling, the aunt who raised them, or a biological parent they have little contact with went to college.

For example, Julianne Castillo, a 26-year-old senior at the University of Hawai'i – West O'ahu isn't sure if she should characterize herself as first generation. Her mother earned a nursing certificate in the Philippines, and her father has some time in college but no degree. They couldn't afford to support Castillo's education, so she took four years off to save money for college. "I feel like I'm kind of in the middle," she says.

In part because of the fluid definitions around first-generation students and programs, there is a tendency to conflate the term with "low income" or with racially minoritized students. Not all first-generation students are Pell eligible, and not all Black students are the first in their families to go to college.

"We need to stop conflating every identity together," says Sarah Whitley. "People assume first gen means "low income" or first gen means Black, and then all the data is a mess. We're not doing the work of disaggregating data and understanding the actual needs of specific populations."

Similarly, an Advising Success Network report on affirming student identities in higher education says, "First-generation college students have complex, intersectional identities, but it is a common misconception to equate being a first-generation college student with being low income . . . . It is critical to name first generation, low income, and social class as separate identities, to prompt deeper student discussion about the ways lived experiences can be different and yet intersect."[20]

Emphasizing the need for intersectional approaches to work with first-generation students, Whitley adds, "some students feel when they get to college, 'I don't get this place. I don't understand the complexities of the bureaucracy.' They often blame that on other identities besides being first gen and then have to learn there are supports and resources. It's not a negative part of who you are. It's an identity learned later in life."

Counter patronizing stereotypes

There is a complex web of overlapping anti-Blackness, colorism, classism, exploitation, and intergroup prejudice inherent in "positive" stereotypes about different racial, ethnic, and economic groups. These reductive and patronizing experiences can take the form of individual students being asked to support educators' own learning, being asked to represent a group, or, conversely, being complimented as a positive counterexample to negative stereotypes, i.e., as "one of the good ones."

Asian Americans in particular carry the burden of "model minority" stereotypes that they are careerist, uninterested in subjects outside of math and science, and universally successful in those subjects.

Meanwhile, while few students are in the practice of identifying themselves in terms indicating economic or social class like "needy," "underprivileged," "Pell eligible," or "poverty affected," some — particularly rural whites — are encouraged to claim proudly the label "working class."

Aggregating all "underrepresented students" as one group enables this patronizing discourse within a college or university, while disaggregated data and individual stories can reveal the damaging impact these stereotypes continue to have.

Expert insights

- *"A lot of institutions try to include more diversity, and that's genuinely a good thing. Sometimes when they meet me, they're like, 'Well dressed. He speaks very clearly. This is our guy. Perfect. This is how we show diversity.' But I know people who, from the way they present themselves, are not given the same opportunities, even though I know they could be doing what I'm doing 10 times better. It's always good to show diverse faces. They are trying their best to open up. But doing that also means you're seeking a certain look." - Mark Lannaman*

- *"Many [Indigenous students] say teachers try to utilize them as their own learning mechanism: 'I'm here ready to learn about American government, and my faculty member is asking me about the treaties of 1851.' That makes students really stressed. They don't want to feel othered, and now they're called out. We've seen faculty asking, 'Who's Native American? Raise your hand.' When [students] have gone to campus wellness centers, they end up having counselors asking about Sundance or using it as a way to learn more about their culture. We put a great deal on the student to be the teacher." - Erica Moore*

- *"Black students tell me they still hear, 'Well, you're Black, but you're not really one of those Black people.' They'll call out a student to speak for the entire Black community. Talking about the 1619 project to a journalism class, [an instructor will ask], 'What can you tell the class?' If it's a constant callout of said identity, that's the identity they feel is going to cause the most problems." - Jasmine Roberts-Crews*

- *"There's a stereotype for Asian Americans that they're pretty smart, they know what they're doing, and you can burden them with most of the work in group projects or assume that they don't need much help. It has definitely got me in some awkward situations where I'm trying to create boundaries for myself and finding the strength to seek help. That's about cultural awareness and not projecting cultural stereotypes. There's more than what you see. There's a lot more." - Eeman Uddin*

- *"I think a lot of — for lack of better words — Brown Asians or Southeast Asians are not expected to be in the sciences or engineering. I've gotten plenty of comments like 'You don't look like someone who teaches chemistry.' It's curious what comes to mind for folks when it comes to that model minority myth." - Elaine Villanueva Bernal*

Enable intersectional analysis and practices

In "First-Generation Student Status Is Not Enough: How Acknowledging Students with Working-Class Identities Can Help Us Better Serve Students," Shonda Goward shares her experience at the University of North Carolina at Chapel Hill, where she was one of the 8 to 12 percent of the student body who was Black. "Many of the African American students I attended college with came from middle-class to wealthy families and attended great high schools with advanced classes," she writes. "Though I did rather well in my high school, I realized that my school did not measure up, and it made me doubt my right to be at such a prestigious institution. At the time there was little discussion of social class on campus, so rather than celebrating aspects of my upbringing, I saw them as a deficit."[21]

It's essential to remember that while there are patterns of lived experience among a given student population, those identities are not mutually exclusive of other identities. A perfect embedding of intersectional perspectives and practices in an organizational culture may depend on the capacity not only to disaggregate data but also to "crosstab" — to tabulate across populations. In the meantime, it's essential to find ways to hear what students say about their intersecting identities.

How salient a given racial, ethnic, or economic identity is for a group of students is hard to track in the existing data. A long list of possible factors influences access to equitable learning, but we know little about which are most important to specific groups or to individuals within a group.

Even when barriers to equity may be shared across many student populations, they will take different forms and are experienced uniquely.

Few students will identify exclusively within a single population. An individual student, for example, may identify with more than one racial or ethnic category (with those included here as the populations of interest and with others not included here). Some may feel they are more impacted by their economic status than by their racial or ethnic identity, or they may feel they are more influenced by identities apart from race, ethnicity, or economic status that were not in the scope of this project, such as sex, immigration status, age, disability, or religion. The aggregation of "underrepresented students" erases all these categories. On the other hand, disaggregation risks homogenizing students within them.

One thing the literature review and interviews for this project revealed is that not only do different facets of a student's identity matter to them in unique ways, but they also matter differently over time as the salience of a given aspect of identity ebbs and flows in different circumstances.

For example, Jasmine Roberts-Crews, an instructor at The Ohio State University, says when she was a mentor in a program for first-generation students, she heard racially minoritized students thinking about their first-generation status for the first time. "I don't even know if students realize beforehand how much higher ed is still not really a space for individuals whose parents might not have attended a four- or two-year institution," she says.

"I don't think you realize until you're actually in this system, 'I don't have the social cultural capital to really figure this stuff out.' I don't think a lot of racially minoritized students are thinking about this first-generation variable or this first-generation identity until they're actually going through that process."

Expert insights

- *"Equity always has to do with my socioeconomic status. That's what got in the way of my education, because my parents couldn't afford to send me or help me with college at all."*
- Julianne Castillo

- *"For me [as an undergrad], it's not that my Blackness or my womanness wasn't salient. It was that the barrier that showed up for me the most in college was income. Because it's the thing that had me working two, three jobs while trying to go to school. It's the thing I was hyper aware of. For students, whatever is prevalent for them can shift. At San José, some students are all in on Latinx. Some [say], 'I don't want any connection to any of this at all. I'm just a student. I don't want to be sent to the cultural center. Don't connect me that way.'"*
- Shonda Goward

- *"If we looked at disaggregated data, would we see barriers that emerge differently for different students? That's really tricky . . . . The categories we use to label students make it even trickier to think about what meaning we can derive about what students need . . . . Because my research area is about schools, I don't hear families talk often about whether they are poor or not. I do hear families talk about power and exclusion and being ignored and not being heard. That is generally a function of their race or ethnicity or home language. [Among college students] their income concerns get voiced when they talk about having to have a job and working full time and going to school full time." - Antwan Jefferson*

- *"Many of our students — if they're going to a predominantly white institution — identify as more than one. They can be a Black Lakota student. When we [indicate] we are something else, we're removed from the count of Indigenous students on that campus. It's another form of erasure." - Erica Moore*

- *"Sometimes the way they address students is like they're 17-year-olds. No mother who has raised three children wants to be treated like a girl who doesn't know any better. I could be ignorant of certain things in college, but teach me. Don't talk down or make students feel like they're less because they don't know. It all matters. It all creates an experience. Being a felon is making it a challenge. And then on top of that, being a minority. Then on top of that, being a woman. Then on top of that, being low income. I don't want to say I feel one or the other is stronger, because I do feel they all play an equal part in my situation." - Renee Restivo Rivera*

- *"When I talk to my students, they're thinking about their identity in terms of how their peer reference group is able to support said identities. In other words, do they actually feel as though they have support from other students in the classroom who are at least willing to understand where they're coming from? And if not, that is the identity or the issue they feel they need the most support on." - Jasmine Roberts-Crews*

- *"When you look at complex and specific data, you start to be able to connect the dots of experience a little bit better. Students will say, 'Well, I don't think that's what it is.' Doing the research with students and having them be also an audience of the research helps them connect the dots. It's one reason why in almost every presentation I give about grading in college classrooms, I talk about data about preschool. It's because I want to help people understand that these things are not disconnected from one another. This is a long arc we need to be thinking about."* - Jesse Stommel

- *"Often, first-gen identity is secondary and we have to work to get students to seek resources for that identity. Some students want to celebrate that identity. They want it to be central and forward facing. Others are still in that space of, 'That's one more label, and I don't know if I need any more labels in my life.' Students have to decide if that's going to be part of their college experience. Some students come to college with their arms wide open to learning about who they are. Institutions are responsible for creating an environment that says first-gen students are welcome here."* - Sarah Whitley

- *"Being a non-traditional age has been viewed as I should know — that because I'm older, there are things I should know or I should have in place or taken care of. I say regardless of whether I am 51 or not, I'm trying to get an education to better my life situation. I'm coming to school. Work with me and help me. Don't hinder me. Don't make me feel less than because I'm 51."* - Jennine Wilson

Colleges and universities need to develop localized data for their region and type of institution

As part of reporting to the Integrated Postsecondary Education Data System (IPEDS), most U.S. colleges and universities establish a set of "peer institutions" using a range of criteria such as academic performance, faculty pay, institution type, and geographic proximity. Often the "peers" aren't comparable to an institution at present but represent an aspirational peer for the purposes of strategic planning, budgeting, and fundraising.

To center equity efforts, a growing body of research suggests that regionality and type of institution should have a priority in comparative data analysis, as those characteristics create unique student bodies and equity issues. For example, one study of broadly accessible institutions (BAIs) found that "a noticeable gap emerged between those institutions located in city/suburban areas and those located in rural/small town areas (including rural BAIs), as rurally located institutions consistently enrolled the highest proportions of Pell recipients."[22] In other words, in this analysis, similar institution types from dissimilar regions had dissimilar results for poverty-affected students.

Elaine Villanueva Bernal's approach to teaching chemistry to non-majors at California State University Long Beach is to examine climate and environmental justice questions in specific local communities using democratized data. Many of her students graduated from nearby high schools, and she and they are keenly aware not only that Long Beach is unique among state university campuses but also that there is important variation in the local communities students are commuting from.

"Where you grew up in Long Beach is very important," Villanueva Bernal says. "If you grew up in the west side, life expectancy is at least seven years below if you're from the east. Where identities intersect, it's not just ethnic or racial identity but literally where people are coming from."

Colleges and universities should take care not to over-rely on national data, says Danielle Leek: "It is important when we're reading reports about higher education to not assume everything applies to every campus equally, and to take the time to think through what is unique about the campus — how our students might have particular circumstances that require a certain type of attention."

Nor should the uniqueness of the institution be an excuse to cast aside meaningful national data or for developing and considering localized data. Jesse Stommel says, "You bring people to the conversation with aggregated data. But ultimately, you have to drill deeper to find something that's actionable. Nationwide data isn't extraordinarily actionable, because it doesn't give us a picture of our specific institution or the experience of specific people. It's useful to get people into the door of a necessarily deeper conversation."

Good teaching practices informed by better data

The experts we spoke with say disaggregated data has the potential to guide educators to better implement good teaching practices. For example, culturally relevant pedagogy has little practical meaning in a context of homogenized "underrepresented students," and a shift from a deficits-based to an assets-based or cultural wealth perspective depends on surfacing the unique assets students bring.

However, many experts also say data can productively call into question how equitable many supposedly student-centered innovations actually are, including open education resources (OER), universal design for learning (UDL), the American Association of Colleges & Universities' high-impact teaching practices, ungrading, the Quality Matters rubric,[23] and adaptive learning technologies. In the absence of a solid understanding of specific student needs, these approaches risk sustaining the same inequities in new contexts.

For example, project-based learning and internships can be invaluable, but they may not be accessible for students with schedules that limit their time on campus or who depend on paying jobs. Many OER require technology access that not all students have. In an environment of information overload, digital learning technologies can potentially reproduce existing equity gaps without thoughtful instructional design and implementation. Colleges and universities need disaggregated data about specific student populations in order to ensure innovative pedagogy and resources actually have an impact for every student rather than for an average student in aggregated data.

Model from the field

The Center for Equity and Cultural Wealth at Bunker Hill Community College in Boston sponsors campus-wide programs to explore "the ways in which meaningful community partnerships, equity-minded practices, and culturally grounded pedagogies can be enacted to foster the success of all students and members of the College community."[24]

One example of applying these pedagogical innovations critically is Robin Zape-tah-hol-ah Minthorn's recommendation to "indigenize" high-impact practices like first-year seminars and capstone courses "to align with the culture and values of certain subpopulations on campus."[25]

Expert insights

- *"When you lump them into one monolith, you neglect the lived experience of students and the cultural experiences they bring to the learning experience. Something as simple as how you engage in a group project or how they submit assignments . . . [W]hen you're lumping everybody into one group, you forget there are the cultural nuances that may come into play with something as simple as reviewing the learning management system. That's where we've fallen short in the field." - Kristal Moore Clemons*

- *"In some cases, in order to reach a professional goal, [students have] to do an internship, but the internship placement may be at a community-based nonprofit, so they can't afford to pay an intern. Racial and ethnic identity, cultural values, and income level may uniquely combine for students who want to pursue professions where they don't expect to make a bunch [of money]. They may do it because it aligns to their values. But in institutions, that's not front of mind. The richness of an internship is front of mind, but the barriers that presents are secondary sometimes." - Antwan Jefferson*

- *"We have failed to see the incredible gifts students bring to the classroom and the many strengths they bring. Our students have so many challenges they face every day. When we identify our homogenizing of the student experience, it gives us an opportunity to look at student populations from an asset-based approach. Research shows that when we give students the opportunity to approach education from a cultural wealth perspective, their opportunities to engage become so much richer. Does a student who identifies strongly with their Asian American heritage or their Latinx heritage get to bring that cultural wealth to that course, to that assignment, to their experience with technology? Where we see barriers as specific, we open up opportunities to succeed at the good work we do in higher education."* - Danielle Leek

- *"Tribal colleges are tracking early momentum data like the number of students who receive zero credits in the first semester. You can actually do something about that. Were they your part-time students? Were they your Pell students? You can zero in on who those students are and devise strategies to serve those students better. They're using leading indicators, which are actionable. That's very exciting."* - Cindy Lopez

- *"I'm paying out of my pocket, and I'm trying to qualify for scholarships I can find. It made me reevaluate what I am doing here. I want to do something I really believe in and feel passionate about, because then I will make a difference. I'm 36. I don't want my whole life to be meaningless. I want to help bring change about."* - Renee Restivo Rivera

- *"When I talk about OER, even though it's an issue I'm passionate about, I try not to present it as the only solution to inequities in higher ed. There are real limitations. It's not just the resource. It's what we can do with that resource. If we truly want this to be a radical tool, we have to think about how we are actually using the tool. If my student can't see how their lived experiences have been reflected in some capacity in the text, we're just doing the same thing that commercial textbook publishers are doing except ours is free."* - Jasmine Roberts-Crews

- *"There are some relatively conservative approaches to UDL that don't recognize the needs of the whole student. If you say UDL, I want to know how you are actually implementing that. High-impact practices, the Quality Matters rubric, UDL, none of them necessarily do good unless you're thinking in a much more thoughtful, critical way. I am a proponent of ungrading. On the other hand, you can't just take away visible goalposts if you're going to replace them with invisible goalposts, because invisible goalposts affect the students that we're talking about even worse."* - Jesse Stommel

- *"Do faculty actually know who is in their classrooms? It may not be putting a notification on each student in your roster that they're first gen, but providing that this class has 60 percent first-generation students, then thinking about how you shift your pedagogy based upon who's in your classroom. Institutions are recommending specific first-generation language in syllabi, talking about that on the first day of classes, and training with teaching assistants or research assistants about how to support first-generation students."* - Sarah Whitley

Support effective digital learning

Digital learning is an integrated part of the experience of most college and university students, but we know very little about how effective it is for specific student populations. WCET and The National Research Center for Distance Education and Technological Advancements (DETA) collaborated on a literature review of the impact of digital learning technologies for particular racial and ethnic groups. The authors reviewed hundreds of publications and found 17 that included the students of interest in their study (students identifying as Black, African American, Hispanic, Latinx, Latino or Latina, Native or Indigenous American, including American Indian, Alaskan Native, Native Hawaiian, or Pacific Islander).[26]

The authors write that "only a handful of studies were identified that could illustrate a relationship between an intervention and practice, and show evidence of impact on student outcomes for Black students." They also describe a "black box" challenge to evaluating digital learning: Data sources may identify how equitable the outcomes of an initiative are, but don't illuminate "the complexity of the instruction, learning, or design" that leads to those outcomes.

Many experts point to inequitable access to hardware, software, and internet services, but they also say the digital divide should be understood in terms of the varied experiences students have irrespective of their access. Some populations are subjected to more online harassment, including in school-sponsored spaces.[27] Some are expected to share their school resources with family members. Some arrive at college with more experience using technology tools for "kill-and-drill" exercises rather than engaging in project-based activities.

To ensure equity for minoritized and poverty-affected students, colleges and universities must have data-informed insight into the varied learning conditions students work in and deliver meaningful digital learning opportunities for every learner.

Expert insights

- *"I've taken classes fully online, asynchronous, and I've also had synchronous classes through Zoom. Asynchronous helps a lot. I can also work. Whereas for synchronous, I have to take off so I can be in class . . . . I was able to get the student discount on Adobe Creative Suite. So it's a lot cheaper than if I did it like with the regular Adobe pricing, so I can still do my work that way." - Julianne Castillo*

- *"It goes back to what they had access to in their K-12 setting. If I'm working at my local HBCU, I'm going to have a variety of students who either had quality distance learning instruction or have not had any whatsoever, and very few in between. I have to tailor my courses and my pedagogical approach to assume students may not have the background in distance learning. They are eager to learn. It's being mindful about how I orient students to how I'm going to be teaching my courses. Breaking down what hybrid learning is and the notion of a flipped classroom. What it means to talk about the content in class but then do some of the work out of class. You just have to really be clear with expectations." - Kristal Moore Clemons*

- *"Let's assume the college has provided money for me to purchase what I need. Now, what are the barriers to my ability to utilize this device? They might include things like the knowledge to be able to figure out how to use it. Do I have access to people who can help me figure it out? Do I feel like what I'm being asked to use it for is relevant to me and that I can produce something with it? Students' relationships to their racial and ethnic identity shapes the way they understand and use digital technology. If we don't look at that connection as educators who want to support our students, we're doing a disservice to the work." - Danielle Leek*

- *"There are unique barriers Black students face when they are in digital learning spaces. There is a collective shared experience among populations that have been marginalized because of oppressive systems. If we talk about the quote-unquote digital divide, we can't talk about this as if it's just an education issue, because what drives whether or not a school is going to be well equipped? There's a whole history behind that in terms of property taxes and redlining. Those are systemic policies that have disproportionately affected Black Americans."
- Jasmine Roberts-Crews*

- *"For my calculus class I had to pay $200 just to do my homework. It's a website where we just do homework assignments, which aren't really helpful. I could do the same thing in the textbook. That's two weeks of groceries right there." - Eeman Uddin*

- *"Online learning has been interesting in the first-gen space. Some students love it because it's giving them flexibility they need. Other students hate it because they want more traditional campus-based support. Can they get access to the writing centers, the tutoring centers, the mentoring programs? We're going to continue to see more first-gen students participating online. We're going to have to think carefully about how we shift the way we offer supports and resources. If getting into the counseling center through a virtual approach is the only way you can do it, I fully support being able to do that. But it's going to be tricky." - Sarah Whitley*

Data sovereignty and the misuse of data

One example of a growing source of population specific data is American Indian Measures of Success (AIMS), which was started by the American Indian Higher Education Consortium (AIHEC) in part to build "data sovereignty" and protect Indigenous students from the misuses of data. AIHEC AIMS serves 35 tribal colleges and universities and non-tribal institutions with large Indigenous populations.[28]

Erica Moore, Executive Director of Native Student Success at AIHEC, says most tribes still experience non-Indigenous researchers "utilizing the community as the research topic and not integrating us as researchers ourselves. Then they leave and control the data that was taken from exploiting that tribal community. Obviously, data without ethical and appropriate interpretation can be used in very negative ways."

AIHEC AIMS, she explains, "first started as a way to manage our own data that's being collected, analyzed, and interpreted for TCUs, and then who has access to it, and how it's utilized or shared. Anyone outside of AIHEC who wants to obtain that data, we filter it through 'Is this the appropriate use?'"

Data sovereignty for TCUs, says Moore, lends itself to taking assets-based perspectives of Indigenous students: "We, as researchers, are often trying to think of the solution. [Non-Indigenous researchers] want to look at why somebody failed. We are trying to look at those who are succeeding and what helped them succeed, instead of looking at it through the deficit lens."

Mitigate the effects of systemic inequity

Many students bring with them the impacts of generational trauma, legalized racism, unequal school funding, and housing and food insecurity, but aggregated student data hides these systemic barriers to equity and the role they play on campus and in online learning. Faculty and administrators may not be able to control these external factors, but instructional design, classroom practices, and institutional policies can both compound and mitigate their influence on learning. At the same time, colleges and universities have their own legacies of racism and classism, as well as internal systems that sustain inequities.

Data-informed, equity-centered pedagogy requires accounting for the various ways students experience systemic inequity. Institutions must take the lead on collecting and sharing disaggregated data about specific student populations and using that to reflect on how the institutions perpetuate inequities for them. Individual faculty must understand and consider that data while also creating space to understand their students' individual needs and assets.

Expert insights

- *"Black families do not want their children in any kind of student debt. You have to realize within the history of the Black community, we've had redlining. We've had predatory lending. There's so much distrust with the financial system. It's no wonder people are not open to loans." - Kristal Moore Clemons*

- *"If we look at institutions and how historically they excluded particular groups and how those exclusions still show up — in the criteria for merit aid, in the criteria for faculty and staff — then it's no wonder students are experiencing inequities. Start with the institutions. What were the exclusions? What were the constructs around that institution? And how does that still show up all the way through, to the policies, procedures, and hiring? The other part is remembering if a student is coming from a school that doesn't have resources because the property values in that area are low, that's not the student being underprepared. That's the United States of America having terrible ways to fund our public education system. Once you admitted them to your school, you said that they were prepared, so you'd better learn to teach them." - Shonda Goward*

- *"There are barriers that get provoked by the lives students live outside of the university that are often not in the university's calculus. Institutional bureaucracy seems to be a representation of values and beliefs that are not driven by students. They're driven by the adult professionals who do this for their living. This produces additional barriers. Higher ed has been guilty for years of extracting people from their communities to educate them and then encouraging them to go and live and work in a different city, which often represents a set of values that are inconsistent with the populations you're thinking about. The equity role of a university is to be conscious about that and extend its reach so that there's better access in places where people are." - Antwan Jefferson*

- *"Economically, there's a strain on tribal communities. It can be difficult for graduates to find employment when returning home. This of course happens for many reasons, including historical and political reasons. This is why tribal colleges do not do student loans, because we know our population has a more difficult time repaying due to the economic strain. This can lead to higher rates of default on student loans. When students go off to historically white institutions, they are encouraged to take student loans. And our students are leaving with too much loan debt coupled with the inability to find employment if their choice is to return to their communities."* - Erica Moore

- *"The deeper we drill down, the more we find out about specific sets of experiences of unique students. A Black student who has PTSD and is working with a disability is going to have a different experience from a Black student who was suspended from preschool. If I think about the impact these specific contexts have on how educators structure their courses or how institutions structure their curriculum, we find that we need much more nuanced thinking. We need to bake flexibility into courses. When you're thinking about someone's identity, their mental health, their basic needs, the fact that they're Black, those aren't things we should just be providing accommodation for. They're things we should recognize as just the fact of who students are and build courses from the ground up to support all students from the outset."* - Jesse Stommel

- *"Sometimes institutions don't realize that if you work with the lens of first-generation students in mind, it's good for all your students, and it's good for your faculty and staff. You're making policies and procedures simpler. The navigation of bureaucracy is easier, and that doesn't hurt anyone. There are plenty of non-first-gen students who don't understand what a bursar is."* - Sarah Whitley

- *"You're not a prestigious academy. You are there for people. Students who go to community colleges have had a lot of setbacks, traumatizing things they went through, so they just never had the time to better themselves. Now we're paying for the education, and that should be tailored to the student, not the professor or the curriculum."* - Renee Restivo Rivera

- *"There was an intentional effort to keep Black Americans from engaging in one of the primary wealth-making opportunities in the United States, which in turn affects school systems, which in turn affects how well equipped individuals are for the next level. I see it still being positioned as, 'Well, if you didn't learn this in high school, I don't know what to tell you.' Systems are keeping these students from accessing certain skills. We're not asking systemic questions. We're still asking individual questions."* - Jasmine Roberts-Crews

Illuminate the experiences of individual students

As we noted in the preface, we did not succeed in our initial goal of finding data to paint a comprehensive picture of how barriers to equity vary for specific populations of racially and ethnically minoritized, poverty-affected, and first-generation students. With some limited exceptions (as we show in the Appendix), not enough disaggregated data exists on that specific question.

In the meantime, to understand this question, we did what educators will have to do: Ask students. As Jesse Stommel explained, "It is extraordinarily important that we ask students how they are learning and build that into every time we engage with students — at registration, at the application, at the beginning of courses. Find as many opportunities as we can to have idiosyncratic conversations with idiosyncratic students experiencing their education in different ways."

Asking students about what does and doesn't create equitable learning is not just a stopgap to use while awaiting the perfect source of data. While data with finer grades of disaggregation can show patterns of experience and advance conversations about equity, it will always need to be informed by what students in a given institution have to say.

> *Expert insights*
>
> - *"A lot of people come in knowing completely different amounts of information, from completely different cultures. It's important to meet them where they're at and try and help them as much as possible to have the best college experience and to succeed and get whatever degree they desire. A lot of students don't succeed because they don't feel welcomed or they don't feel college is for them because they've had bad experiences trying to understand the culture of college. It's important for teachers to help students as much as possible by trying to understand them." - Zaire McMican*
>
> - *"A community college is for those of us who are non-traditional students. We are working class. If we don't work, we don't eat. We have children who are a priority. Although every student wants to better themselves, not every student can. It's easy to feel hopeless and overwhelmed and that maybe school's not for you or, even worse, that you are not cut out to be a student and will forever be stuck where you are. And people do. They live their whole lives working minimum-wage jobs just to eat and survive and pay their bills. They [educators] are in a position to teach a man/woman to fish. The challenge is rising to the occasion and addressing the needs of the student. After all, without the students, what's a college? Without a community, what's a community college?" - Renee Restivo Rivera*

Part 2: What Works To Remove Barriers to Equity for Unique Populations

What PWIs can learn from HBCUs and TCUs

Aajahne Seeney is a first-year elementary education major and Spanish minor who dreams of starting her own early childhood center. She says a historically Black college or university wasn't always in her plans, but now that she's at one — Delaware State University — she says, "If I had gone to a PWI [predominantly white university], I would have faced more barriers."

Seeney treasures the bonds she has formed with Black faculty with experience in her chosen field. "The professor of my child development class focused a lot on identity," she says. "She talked about experiences she went through as a child, and we could relate. We were laughing in the classroom, and we shared our experiences. She shared how her background made her a better teacher, and she's talking to future teachers. That was the class I learned the most in."

Seeney says the comfort she feels at an HBCU extends to her experience with white faculty. "They have a certain bond," she explains. "Trust is a big part of teacher-student relationships that I don't feel like you're necessarily getting if you're at a PWI and you're a Black student. White professors may feel like they can't relate, but at my school they can relate."

A study by the Urban Institute characterizes HBCUs, along with tribal colleges and universities, as "mission-driven MSIs [minority-serving institutions]," which may distinguish them from other MSIs that don't have racial and ethnic equity in their culture from their founding.[29] For example, the study included a survey of student satisfaction that found "students who attended HBCUs and tribal colleges value their educations highly, but not students who attended Hispanic-serving institutions." The authors also cite scholarship showing that colleges and universities that have increased enrollment of minoritized students haven't necessarily increased support for them.

Similarly, Cindy Lopez, Director of Tribal College and University Programs at Achieving the Dream, characterizes TCUs as "equity-by-design institutions based on their location, the students they serve, their physical design, their approach to serving students, and cost."[30]

Asked what PWIs could learn from the equity foundations of TCUs, Lopez says, "culture and context matter. I say that over and over again. That's for all students. Having a better understanding of the culture and context of your students and asking the right questions is very important."

> "Math, English, sciences, graduate, get a job. Yes, that was important to us. But TCUs were founded to ensure traditional ways of learning."
> - Erica Moore

In addition to having culturally relevant curriculum and pedagogy baked in at TCUs, the work to confront, identify, and reduce racial barriers to equity is part of the culture of the institution in both academic affairs and student affairs, and in other operations. "It's not just wraparound supports," Lopez explains. "It's developing relationships with students in an intentional way. It's giving them increased and more frequent advising."

Erica Moore, Executive Director of Native Student Success at AIHEC, says the emphasis on culture can and should apply to historically white institutions with increasingly diverse student bodies. She points to the example of South Dakota State University's American Indian Student Center. "Students there continue to see their enrollment and graduation numbers increase, the more they incorporate that into their campuses," she says.
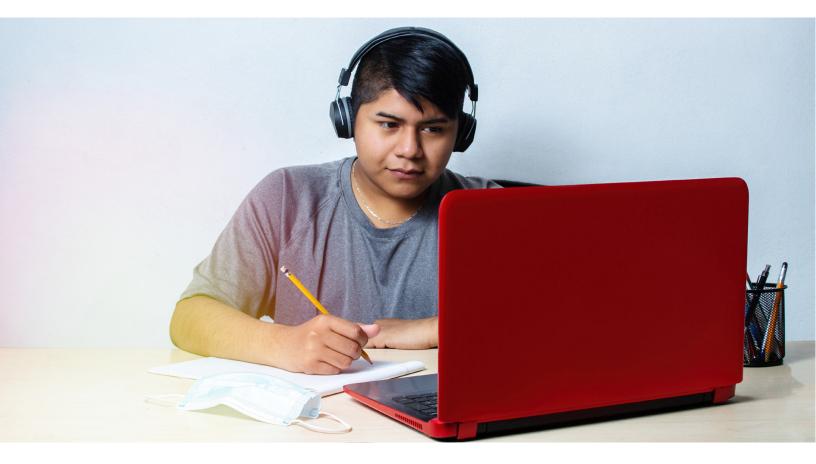
"Non-tribal colleges — all colleges — should have a culturally responsive way of engaging all students, meeting students where they are, having equity in retention, advising, and funding access for all students."

Kristal Moore Clemons, who has helped launch online degree programs at two HBCUs, says, "The ethic of care and the commitment to history and culture is unique to HBCUs. Because of the culture at these institutions, we look at the whole student. We look at the lived experience. We look at what's going on in the home. We have a communal atmosphere based on access and opportunity, where we don't want students to fall behind. Majority institutions can learn a lot from the access and opportunity."

Seeney says she has appreciated that ethic of care across campus at Delaware State: "Everybody is on the student's side," she points out. "Financial aid is a big part of me going to college, so it's essential for me to go there and feel like I'm able to trust them and know how to handle these situations."

Meanwhile, back in the classroom, she notices how personal connections with faculty lead to more personalization and flexibility. "One teacher always acknowledges that some students are working or in a situation that may not be perfect at home," Seeney says. "So she would say, 'You can just reach out to me.' It makes you feel like your teacher wants you to succeed. Teachers who understand students have a lot going on in their lives are knocking down barriers."

While Seeney is glad to be at an HBCU, she says much of what she is experiencing could happen elsewhere. "It comes down to understanding a student's individual needs, because every student is different," she explains. "One Black student is different from another, but it's important to acknowledge it and not ignore it. Share your experiences and let students know you're there for them."

The MSI isn't a monolith either: What are HBCUs, PBIs, TCUs, NASNTIs, HSIs, AANAPISIs, PWIs, and historically white institutions?

The term Minority-Serving Institutions (MSI) is often used generically for all colleges and universities that serve a high percentage of a particular racial or ethnic group. Each type of MSI is defined by a mix of their historical origins and their eligibility for various forms of federal funding. As of 2016, there were over 700 MSIs under the definitions below, enrolling over five million undergraduate and graduate students.[31]

Historically Black Colleges and Universities (HBCU)

The Higher Education Act (HEA) of 1965 defines an HBCU as "any historically Black college or university that was established prior to 1964, whose principal mission was, and is, the education of Black Americans."[32] Through institutions gaining or losing regional accreditation, the number of recognized HBCUs has changed over time, and in 2020, there were 101 recognized HBCUs in U.S. states and territories, including 52 public and 49 nonprofit institutions, and they conferred over 48,000 degrees. About 75 percent of students in HBCUs identify as Black.

Predominantly Black Institutions (PBI)

Sometimes people mistakenly characterize all predominantly Black institutions as HBCUs. The reauthorization of HEA in 2008 extended funding opportunities to institutions other than HBCUs with undergraduate Black enrollment of at least 40 percent (among other criteria related to accreditation and the percentage of Pell-eligible students.) As of 2018, there were 104 PBIs in the U.S. Many are historically white institutions where the composition of the student body has changed over time.[33]

Tribal Colleges and Universities (TCU)

TCUs are institutions chartered by an Indigenous tribe in the U.S. In 2021, there were 37 TCUs, with at least two more in development. They prioritize preserving Indigenous culture, language, lands, and sovereignty. They are often multi-campus institutions. Currently, they all offer associate's degrees, 18 offer bachelor's degrees, and five offer master's degrees. They serve over 160,000 students annually.[34]

Native American-Serving Nontribal Institutions (NASNTI)

The reauthorization of HEA in 2008 extended funding opportunities to institutions other than TCUs with undergraduate enrollment of at least 10 percent American Indian/Alaska Native. Many are rural public state colleges and universities adjacent to tribal communities. In 2020, there were 37 NASNTIs enrolling over 78,000 undergraduates, 19 percent of whom were AI/AN students.[35]

Hispanic-Serving Institutions (HSI)

The reauthorization of HEA in 2008 established HSIs as those with undergraduate enrollment of at least 25 percent Hispanic students. In 2019, there were 539 HSIs in 27 states, enrolling over 2.1 million Latinx undergraduates, and there were another 352 that *Excelencia* in Education characterizes as emerging HSIs with growing Latinx student bodies and nearing the HEA definition.[36]

Asian American and Native American Pacific Islander-Serving Institutions (AANAPISI)

The reauthorization of HEA in 2008 established AANAPISIs as those with undergraduate enrollment of at least 10 percent Asian American and Native American Pacific Islander students. In 2016, there were 113 AANAPISIs in 15 states. The institutions enrolled 1.4 million students and awarded 235,700 degrees, with approximately 20 percent of those to Asian American or Pacific Islander students. They account for 22 percent of all associate's and 21 percent of all bachelor's degrees earned by this population.[37]

Predominantly White Institutions (PWI)

PWI is an informal usage that includes most colleges and universities in the U.S. that were founded primarily or exclusively for white students and where the student body remains majority white. Under the definitions above, many MSIs are PWIs. However, in some so-called PWIs, white students are less than 50 percent of the student body and might now be better described as "historically white institutions."

Student affairs is leading the way

With the possible exception of HBCUs and TCUs, as noted in the previous section, initiatives to identify and remove barriers to equity for particular student populations tend not to be a shared responsibility across institutions. It's easier to find examples of support uniquely tailored to specific student populations from the student affairs divisions of U.S. colleges and universities. Student affairs has a more built-up history of culturally specific programming, affinity groups, housing, and intensive cohort-based wraparound services for specific populations.

Within academic affairs, there are three areas where examples of interventions and supports tailored for specific populations are sometimes found. The first is academic support programs such as tutoring and writing centers. The second is academic advising. The third is academically centered programming that happens outside of the regular course schedule or classroom environment, such as targeted summer research cohorts, study abroad opportunities, and internships.

The research and advocacy organization *Excelencia* in Education has supported many of these programs (in both academic affairs and student affairs) serving Latinx students and has a growing library of inspiring case studies to learn from.[38] The next section of this report includes a sampling of initiatives designed for specific populations.

Student affairs programs tend to be "inoculating" rather than "sustaining."[39] The centers of gravity for support programs are the transition from high school to college, the transition from college to career, and moments of crisis.

Expert insights

- *"Faculty aren't trained to teach, let alone to look at inequity in their pedagogy. So you see student services picking that up, and we can't do it. High DFW rates happen in the classroom. Faculty don't like being called out on it. To be fair to faculty, the requirements for them keep changing. They are saying, 'Do you want us to be a teaching institution or a research institution? You have us doing 16,000 different committees. When do we have time to work on universal design and closing equity gaps?' Lecturers don't get paid enough to do this. It's higher ed making equity a priority and ensuring that [renewal, tenure, and promotion] requires training in this area and some correction when year after year you're seeing the same students failing your class." - Shonda Goward*

- *"It is often a student affairs-driven conversation. However, we are seeing institutions committed to first-gen work realizing that crossing that divide is essential — more student success divisions. Collaboration is the only way we will get the work of supporting first-gen students out of just being programmatic. If we want to institutionalize change for all students from marginalized communities, we have to be able to do that in classrooms. The number one question I get in the Center is how we engage faculty and academic leadership in first-generation work. We can offer all the resources in the world, but if we're not getting it right in the academic spaces, students aren't going to be successful." - Sarah Whitley*

Design targeted initiatives with data-informed partnerships

We encountered several initiatives and projects designed to reduce barriers to equity for specific student populations. What many of them have in common is partnerships with local communities, with nonprofit or advocacy organizations that provide grants or technical assistance, or with a broad base of partners across the institution. Cohort-based programs led by student support offices are common, but there is a tension between programs with wraparound supports for small cohorts and the need to serve every student.

One comprehensive resource of inspiration about targeted programs with measurable results is the programmatic grants made by *Excelencia* in Education. Years of grant reports have enabled them to accumulate significant insight about targeted initiatives to support Latinx students. These are summarized in their 2021 report *What Works for Latino Students in Higher Education* and in a database of grantee profiles.[40]

The funded programs include examples of colleges and universities implementing intrusive advising, holistic advising, strengths-based advising, culturally relevant programming, career and transfer pathways, structured onboarding, cohort learning communities, priority registration, peer-led one-credit courses, study abroad programs, and bilingual and Spanish-language courses. Scanning the history of those grants, *Excelencia* in Education finds several common evidence-supported characteristics that have emerged: The programs that work are asset based, data informed, community building, holistic, and affordable.

Another ongoing project illuminating what works for specific student populations is Achieving the Dream's collaboration with a cohort of tribal colleges and universities to build capacity in data collection and evidence-based planning. Since the start of the project in 2017, individual tribal institutions have implemented enrollment and registration technology to help with retention, paired advising, co-advising, graduation pathways, comprehensive communication audits, real-time attendance tracking, biannual elder days, and pre-college partnerships with community high schools.[41] For example:

- Stone Child College in Montana includes a course in its rural health certificate program on historical trauma to better understand how "it relates to [students], their community, and rural health at large."[42]

- Data at Nueta Hidatsa Sahnish College in North Dakota revealed a struggle to communicate important information during orientation for new students in ways that were personalized and relevant. Their innovation was to blend orientation into a required first-term psychology of learning course.[43]

- Little Priest Tribal College in Nebraska acted on the student success section of its strategic plan by partnering with local public schools to expand free summer bridge programs for K–12 students and strengthen college preparation.[44]

Similarly, a landscape analysis by the Center for First-generation Student Success is a source of inspiring exemplar programs designed for that population.[45] Some examples they've documented include:

- The University of Michigan's First Generation Student Gateway provides an information resource area and gathering space.

- Clark University's Office of Multicultural and First Generation Student Support hosts workshops and a first-generation student union.

- The University of Texas at Dallas developed an academic bridge program for first-generation students with weekly seminars and tutoring in math and rhetoric.

- Rutgers University–New Brunswick prioritizes data collection on first-generation initiatives and uses the data in an annual forum of faculty, staff, and students to discuss access, equity, and inclusion.

However, there are risks to overemphasizing these cohort models, says Sarah Whitley. They are not always data informed, they may not be sustainable, and they are rarely scalable to all those on campus who need support. In short, while they can be impactful for the cohort, they don't necessarily lead to the systemic change necessary to create equity for all first-generation students.

Tools from the field

These practical tools support disaggregating data and creating equity-centered institutions and teaching practices.

Knowing Our Students: Understanding and Designing for Success, a Guidebook for Institutional Leaders from Achieving the Dream and the Advising Success Network includes sections on collecting and using disaggregated data.

The University of California's Center for Urban Education provides several racial equity tools, including the Equity Scorecard.

"A lot of the institutions we work with have 70 to 80 percent first-gen students, but if I home in [for a more specific group], that might take me down to 10 percent of students," she says. "Those supports and services are highly resource intensive. They need full-time staff. While that is wonderful, it is not scalable to support the needs of all marginalized populations. You can't support all your Black students or all your Latinx students with that approach."

The Center for First-generation Student Success advocates shifting institutional infrastructure to create environments based on understanding who students are. "If their academic advisor and someone in the Financial Aid Office understands the needs of a first-gen student, [a program] may not need to follow them everywhere they go across their academic careers," Whitley says.

"Some students need that level of programming, but realizing we're not going to give it to everyone, how do we create environments where the rest can be successful? How do we build infrastructure so that if a first-gen student doesn't make it into that boutique program, they can find the supports and resources they need in other places?"

Students value kindness and understanding

Students' hunger for and appreciation of empathy from faculty and staff leapt out of the interviews for this project. When asked for examples of good teachers who came to mind, students didn't mention innovative pedagogy as much as common human courtesy — giving feedback, answering questions, learning students' names, pointing to helpful resources, and being flexible about deadlines. These behaviors stand out to them in contrast to many other experiences.

Renee Restivo Rivera has a unique perspective in that she returned to the same institution 15 years after stopping out. Asked what barriers she ran into the first time, she says, "I was in an abusive relationship. I was 19 years old. I just had my son. It was very, very hard. I wasn't able to balance everything. I don't want to say no one cared, but it was like, 'If this is a challenge you can't meet, I'm sorry, but maybe you have to figure something else out.' I didn't feel the support that I feel this time."

Recently for a project on identifying effective digital learning experiences, Restivo Rivera interviewed one of her current teachers, "because she was so good at what she did that people could use her as a template," she says. "There are some very good teachers who are supportive. When they assign work, they don't make you feel like you're just doing what's necessary. They actually give your work feedback and try to make you better or give you a different perspective."

Likewise, while working in Restivo Rivera's student leadership, the kindness of student support staff stands out to her. "The advisor [of the Students of Color Alliance] is such a helpful person," she says. "She's very empathetic, and she cares about students. It's not easy to run into people who are good people anywhere, not just the college. They just seem to have a lot of good staff right now."

> "There are some very good teachers who are supportive. When they assign work, they don't make you feel like you're just doing what's necessary. They actually give your work feedback and try to make you better or give you a different perspective."
> - Renee Restivo Rivera

Expert insights

- "I do have teachers who are more understanding if I have to pick up a shift because somebody's sick. Other classes, the deadline is strict. If you miss it, then you don't get any points. [I wish they understood] not everybody has traditional college experience. Some people have to work in order to go to school. Everybody's lives outside of school don't always look the same." - Julianne Castillo

- "I ask students to tell me if there are periods when they know they can't make it to class or they can't work on this assignment because they've got religious observations or they've got a family commitment. I try to communicate to them that my goal is to make sure these learning outcomes are reached, and there are places I'm willing to make adjustments." - Antwan Jefferson

- "Radical empathy for students should not wait. We need to put that at the forefront, as opposed to, 'We have to get through this content.'" - Jasmine Roberts-Crews

- *"When I see data that one in two college students has experienced food insecurity in the last 30 days, that fundamentally changes the work in the classroom. Every bit of data we encounter that gives us a picture of who our students are should necessarily change the way that we structure policies at our institutions, but also the pedagogies." - Jesse Stommel*

- *"My professors have been so wonderful that you can reach out to them at any time. I've reached out to my professor at 10 o'clock. 'I don't understand this, and I have to take this test in 20 minutes.' I'm disturbing their night. But they're still there supporting me, helping me, guiding. My professors are phenomenal. I want my professors to give that little piece of information they might think is insignificant to that 51-year-old, because it's not. Even the most minute detail is important. I almost did not finish this program, and my professor was the one who helped me get the ball rolling to get my financial aid back. It was my professor." - Jennine Wilson*

Students value safe space to address issues of identity

Though it is a sample size of only seven interviews, we were struck by how, unprompted and independently, the students we talked to describe a desire to get into uncomfortable conversations about identity. To questions about what colleges can do to reduce barriers to equity, the concept of safe spaces for conversation came up several times. Despite racial battle fatigue, patronizing encounters, and the alienation of being asked to educate white faculty and peers about racial and ethnic identity, the students we spoke with still hope for the opportunity to share themselves and to learn from others.

Eeman Uddin makes the point repeatedly that students and faculty being unfamiliar with one another's cultures creates its own kind of barrier to equity. "Sometimes you sit in classrooms, and you realize a lot of people don't know things you would expect them to know, including myself," she says.

"There's a lot of bias in the way we teach culture. Sometimes we tiptoe around a lot of things that we should just have discussions about. It's interesting to have conversations on cultural pedagogy and diversity so you're aware of everyone's perspective. It's uncomfortable sometimes to ask questions or even answer questions on the spot, so having places where you can have discussions that are safe and where there's open communication is very important on college campuses."

Uddin describes frequently getting into "awkward situations" because of religious practices that her peers aren't familiar with — not shaking hands with the opposite sex or being discovered in an empty classroom where she has tried to find a private place to pray. "I'm trying to explain it, but it comes out weird, and I don't know what to do," she says. "I wish we had a place to talk about that and have more of a community where people [share] about their culture or religion, so it's not a barrier. I do wish professors got to know their students a little better."

Renee Restivo Rivera, who participates in student leadership, has tried to develop conversations between the campus and the surrounding town because "the ties are not very tight for some reason," she says. "They seem to be almost at odds with each other. The college wants to be helpful but has a lot of work to do. Community is everything, and there isn't much to foster a safe zone to talk about your problems without being condemned."

Mark Lannaman spoke at length about the special time and space that a college campus can be for learning from one another:

> "Diversity is our strength. It can sound clichéd, but I want college educators and leaders to understand that. I don't think there's ever been a time in human history where we've had this many people from diverse backgrounds all in one space. So we should deconstruct the default as white and make it to where there is no default. We can all learn from each other. I sincerely mean that. Cultural exchange is really valuable, especially in a space like college. I'm not sure where else you will get this body of people where it's okay to explore different interests. College leaders, I hope, recognize that this is a pivotal time in people's lives and a unique space that you don't get at any other point of your life, so to not maximize that is wasted potential."

Toolkit

Below is a selection of resources on data-informed, equity-centered digital learning produced by Every Learner Everywhere in collaboration with its network partners.

Adaptive Courseware Implementation Guide shares lessons from course instructors with experience centering racial and socioeconomic equity and student voice in the adoption and implementation of adaptive courseware.

Caring for Students Playbook: Six Recommendations suggests equity-focused strategies that put student care into practice by acknowledging student challenges while identifying student assets.

Equity Evaluation Tool: A Process Guide for Equity-centered Educational Materials poses critical questions that illuminate privilege, bias, exclusion, and misrepresentation and that promote equity-minded language.

Getting Started with Equity: A Guide for Academic Department Leaders is a resource for deans and other institutional leaders to start conversations in academic departments about advancing equity and justice in curricula and teaching.

Improving Departmental Equity Using the IMPACT Framework includes worksheets for anticipating, acknowledging, and redressing racism perpetuated by academic departmental policies and practices.

Learning Analytics Strategy Toolkit helps the reader assess campus readiness to use learning analytics and provides the tools to start.

Strategies for Implementing Digital Learning Infrastructure to Support Equitable Outcomes: A Case-based Guidebook for Instructional Leaders focuses on building infrastructure for high-quality digital learning and outlines specific recommendations and examples.

Student Leaders Speak to College Presidents, CEOs, and Policymakers shares the perspective of 25 student advocates for inclusive campus leadership.

The Every Learner Everywhere YouTube channel includes a growing archive of conference and webinar presentations featuring experts in equity-centered, evidence-based digital learning.

Conclusion

All the experts we spoke with for this report were at pains to emphasize that even disaggregated data has to be part of an institutional culture of understanding individual experiences, needs, and assets. A richer understanding of students must also be accompanied by a willingness to reflect on policies and practices and to change. If a college or university has more detailed information but only sees in that a more vivid picture of students who aren't college ready, that also will reinforce existing inequities rather than address them. As Jasmine Roberts-Crews says:

> "In disaggregating data, we are disaggregating stories. Not everyone's story is the same in the classroom. It's a serious missed opportunity when we assume said story is the same thing for this other individual. We miss the opportunity to affirm these various different groups' humanity. We do have a shared experience, but at the end of the day, we have to realize there's a human we're talking about. We are teaching students, not content. We are trying to reach students, people. At the end of the day, we're trying to affect human lives."

Colleges and universities need to disaggregate data in order to illuminate the ways students are not the same, the ways they encounter barriers to equity differently, and the different assets they bring to their learning. We recognize that collecting and analyzing data with greater granularity is an enormously complex challenge that requires the support of credentialed professionals.

Ultimately, though, institutions of higher education are not working with actual student data if it's not data about the institution's actual students. Data that homogenizes students reinforces inequities rather than illuminating and supporting efforts to address them. Disaggregating student data must be a priority to further equity efforts.

We offer *Toward Ending the Monolithic View of "Underrepresented Students": Why Higher Education Must Account for Racial, Ethnic, and Economic Variations in Barriers to Equity* in the spirit of advancing conversations about equity in U.S. higher education that, we believe, have been limited by the tendency to homogenize all students who are experiencing barriers to equity. We invite readers to question aggregated categories of students such as "underrepresented minority," to become familiar with the multiple ethnic and racial categories conflated in terms such as Black, Latinx, Asian, and Indigenous, and to commit to learning from students how we can best support their specific and intersectional identities.

We also invite you to join us in identifying and promoting evidence-based digital learning that improves outcomes for Black, Latinx, Asian American and Pacific Islander, Indigenous, poverty-affected, and first-generation students. We look forward to collaborating with institutions, nonprofits, and advocates devoted to equitable higher education through digital learning. You can learn more about how to engage with us, our partners, and our work on the Every Learner Everywhere website.

Appendix: Where Disaggregated Data Exists and What It Can Show

A premise of this project is that aggregation reinforces structural inequity by hiding the differences, unique challenges, and assets students bring, and by forestalling better institutional planning, instructional design, and classroom practices. We are by no means the first to point this out or to call for higher education to improve on this issue. We drew inspiration and insight from others who forcefully made the case already.[46]

At the start of the project, we did not know what data we would find, but we had a sense that there is useful nuance to be discovered in disaggregated data that could inform the way colleges and universities think about challenges to equitable education. We believed that analysis and conversation about well-known barriers to equity such as the digital divide, student food insecurity, the racialized student loan crisis, disparities in academic preparation, disparities in college-going knowledge, and inflexible institutional policies would benefit from pulling apart the monolith of the "underrepresented student." We started out asking if six student populations of interest for this project — Black, Latinx, Indigenous, Asian American and Pacific Islander, poverty affected, and first generation — encounter barriers to equity in different degrees or experience them in different ways.

As we note above, we did not find enough data to demonstrate that comprehensively. Despite the awareness higher education has had of the need for better disaggregated data, progress has been limited. For example:

- Tyton Partners' *Time for Class 2021* report on the state of digital learning notes that "only 29 percent of faculty teaching introductory courses say that their institution encourages faculty to disaggregate data by race to analyze course-level outcomes."[47]

- A survey by NASPA's Center for First-generation Student Success showed that 80 percent of institutions say they identify first-generation students in the admissions process, but only 27 percent say they identify those students in student information or records systems and "some practitioners also noted simply not having a strong understanding of how to analyze and implement first-generation data once they gain access . . . . The result is that programs and services are left without an informed foundation."[48]

- One of the largest annual sources of data on student employment outcomes is the "First Destinations" survey by the National Association of Colleges and Employers, encompassing in the most recent report more than 563,000 baccalaureate graduates. The 2020 report was the first time the survey requested that responding institutions include data on race and ethnicity, and 38 percent did so.[49]

- However, little progress is not no progress. It's important to note many of the sources cited throughout this report make the case for more and better disaggregated data while in the process of furthering the work, and they provide intriguing glimmers of how "underrepresented students" can better be accounted for in all their variety.

The most comprehensive publications we found that disaggregate student data on the populations of interest for this project (and that also include several chapters of insightful commentary and analysis) are the 2019 ACE report *Race and Ethnicity in Higher Education* and a 2020 supplementary report (both are available at https://www.equityinhighered.org). The reports include over 200 indicators on pre-college academic preparation, admissions, financial aid, student borrowing, family income, degree completion, graduation rates, and employment outcomes, as well as on faculty diversity. The ACE reports also stand out by accounting for associate's, certificate, bachelor's, graduate, and professional programs.

Another helpful source of disaggregated data is the 2019 report from NCES titled *Status and Trends in the Education of Racial and Ethnic Groups,* which summarizes pre-primary, K–12, and higher education progress data disaggregated by race and ethnicity.

As we described in the Introduction, these excellent sources still don't completely close the gap on the specific questions we're interested in. One, they tend to illuminate the inputs and outputs — college readiness and enrollment on one end and degree attainment and career outcomes on the other end — while there is far less data about what students experience in the classroom or online learning environment.

Two, they may not account for the significant heterogeneity within populations like Latinx or Asian American or Pacific Islander. Those that do are about specific populations but aren't designed for comparative purposes. We drew insights from these excellent sources of disaggregated data:

- The American Indian Measures of Success, which is managed by the American Indian Higher Education Consortium, works with tribal colleges and universities and other institutions with sizable Indigenous student populations to collect and analyze data about Indigenous students.

- The Southeast Asia Resource Action Center and The Institute for Higher Education Policy published *Everyone Deserves to Be Seen: Recommendations for Improved Federal Data on Asian Americans and Pacific Islanders*.

- The research resource library of the *Excelencia* in Education website includes comprehensive data on Latinx students and Hispanic-serving institutions.

These and other sources we identified do help to begin filling in pictures of the student populations of interest, the barriers to equity they encounter in U.S. higher education, and ways to reduce those barriers. The remainder of this Appendix provides a sampling of that data.

The material below is necessarily something of a potpourri. One excellent source of data and insights about a given student population may not share the same indicators as a report about another population. Therefore, it is challenging to rationalize information across all the student populations of interest. This selected data, while not conclusive, is suggestive, and it is offered to invite more conversation about how to remove barriers to equity for every student.

Student population profile: Black students

A heterogeneous group with several sizable subpopulations

In addition to the descendants of slaves, Black Americans include immigrants and the children of immigrants from sub-Saharan Africa, the Caribbean, Central America, South America, Europe, and the Middle East. This large and growing share of the Black population in the U.S. is extremely heterogeneous in language practices, religious practices, and education attainment, and they have varied experiences with colonialism, genocide, national independence, war and displacement, religious persecution, and inequitable educational institutions.

- Approximately 10 percent of the Black population in the U.S. is foreign born, and that is projected to be 16 percent by 2060. Another 9 percent of the Black population in the U.S. is a child of at least one Black immigrant.[50]

- Caribbean countries are the largest source of Black immigrants, but African countries are the fastest-growing source.[51]

- Foreign-born Black people in the U.S. are more likely than other immigrant groups to have gained citizenship, more likely to have been admitted as refugees or asylees, and less likely to be in the U.S. without authorization.[52]

- The percentage of Black adults over 25 with a bachelor's degree ranges between 11 percent for immigrants from Somalia to 64 percent for immigrants from Nigeria.[53]

- Colorado is the state with the fastest growth of the Black immigrant population "with over 400 percent growth from 2000 to 2019, much larger than the state's general population growth of 34 percent over the same period. Washington, Nevada, Indiana, Ohio, Texas, and Minnesota also saw over 250 percent growth since 2000. Arizona, Tennessee, North Carolina, Georgia, Pennsylvania, Virginia, Maryland, and Massachusetts have all seen growth of over 100 percent for Black immigrants."[54]

How this group is defined and counted changes over time

A meaningful summary of how Black people in America have been defined and how they have identified themselves is beyond the scope of this report. To visualize just one facet of that evolution — U.S. Census definitions — the Pew Research Center produced an [interactive online tool that shows what language was used in every decennial census since 1790](.)[55] Changes in how Black people are defined and counted continue into the present generation. For example, the 2020 Census was the first not to use the term "Negro," the 2000 Census was the first to allow people to identify as more than race, and the 1970 Census was the first to let people identify their (single) race themselves.[56]

K–12 experiences and college plans

Black students in general have more experiences in K–12 education that "create an uneven playing field for those who do matriculate" but are more likely than other racial and ethnic groups to report they were very sure they would pursue a bachelor's degree.[57]

Debt, financial aid, and perceived value

- "Borrowing patterns, amount borrowed, and experiences with loan repayment differ significantly by race and ethnicity. In particular, Native and Black or African American students were more likely to borrow and more likely to face difficulty repaying their loans than other groups . . . . Receiving grant aid but not borrowing was more common among Asian and Hispanic students than among Black and white students . . . . Some students do have unmanageable levels of debt, and African American students are particularly likely to be in that situation. The same is not so true for Hispanic students, whose circumstances are often perceived as similar to those of African Americans."[58]

- "Black borrowers and their families are accumulating more debt on average and their struggles with repayment result in some of the highest default rates . . . . As parental wealth increased, student loan debt decreased. When disaggregated by race, however, the inverse association held for white families but did not for Black families. In other words, Black parental wealth was not associated with the amount of debt their children accumulated."[59]

For-profit colleges

"Black or African American, Native, and Hispanic or Latino students were much more likely than their Asian and white peers to enroll in and complete degrees at for-profit institutions. This is particularly problematic, as students who enrolled in these institutions tended to have higher borrowing rates and faced larger debt burdens than students enrolled in other sectors."[60]

Impact of household income

For most groups of college-going 12th graders, higher family income correlates to higher math scores. The exception is for Black students, where "regardless of eligibility for the national school lunch program, more than half of Black or African American 12th graders were in the below-basic-achievement level for math." A similar trend is seen with high school GPA. Black students appear to benefit less than other minoritized students from the effect of higher family income.[61]

Impact of parents' education

The opposite trend appears true for parents' education. Across most of the racial and ethnic groups, there may be little difference in the effect of one parent having some college experience, but among Black students, one parent having some college correlates to 17 percent fewer students being below proficiency in math. Black students appear to benefit more than other minoritized students from the effect of a parent with some college experience.[62]

Mental health

"Recent studies show that Black students face a hidden mental health crisis, and that these students draw upon grit and tenacity to persevere in school; however, they also are less likely than their peers to seek

institutionalized support."[63]

Graduation and post-graduation outcomes

- "At both the undergraduate and graduate levels, advances in Black students' enrollment and attainment have been accompanied by some of the lowest persistence rates, highest undergraduate dropout rates, highest borrowing rates, and largest debt burdens of any group."[64]

- "A substantially higher percentage of white [B.A.] graduates (51 percent) found full-time employment in standard employment situations than did Black or Hispanic American graduates (41 percent) . . . . Asian American graduates reported far higher average starting salaries than did any other ethnic

group . . . ."[65]

Student population profile: Latinx students

A heterogeneous group with several sizable subpopulations

"The groups with the largest representations and a long historical presence in the United States are Mexicans and Puerto Ricans. Though comprising the overwhelming majority, the representation of Mexican-origin individuals has gradually declined since 2008 with increased immigration from other Latin American countries. Salvadorans, Cubans, Dominicans, Guatemalans, and Colombians, each with more than a million residents across the country, are among the next largest Latinx populations."[66]

How this group is defined and counted changes over time

• The definitions Latinx, Latino, and Hispanic and who is included change over time, so longitudinal data isn't consistent. For example, a 1997 rule by the United States Office of Management and Budget wasn't fully instituted until 2003, which affected how Hispanic as an ethnicity was reported in many federal documents. As a result, trend lines going back further than 2003 aren't easy to show.[67]

• Between the 1920 and 1960 U.S. Census, Mexican Americans would be categorized as white, as racially Mexican, and as white again, "giving them more legal rights and privileges . . . . In the 1970 census, a sample of Americans were asked whether they were of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish origin — a precursor of the universal Hispanic question implemented later. The 1980 census asked all Americans whether they were of 'Spanish/Hispanic origin,' and listed the same national-origin categories except for 'Central or South American.' The 2000 census added the word 'Latino' to the question."[68]

Linguistically diverse

Existing supports for Latinx students may overlook significant linguistic diversity. There is a tendency to conflate being a heritage speaker of Spanish with being a speaker of English as a second language (ESL). Heritage speakers of Spanish are proficient in English, and it is their primary language outside the home.[69]

Ethnic vs. racial diversity

"Though some Latinx students identify as Mestizo — meaning a combination of Indigenous, African, and European ancestry — others identify as fully Indigenous, especially individuals from areas in southern

Mexico and Central America. Moreover, some students also have African and Asian roots throughout the Caribbean and South America."[70]

A growing and widely distributed population entering college

- "Large Latinx communities have been historically concentrated in a few states in the southwest, south, and northeast. However, the 'New Latino Diaspora' describes the Latinx migration of new immigrants and multigenerational U.S. citizens to other states and regions, such as Oklahoma, North Carolina, and Washington. Reflecting this population growth, more Latinx students are enrolling in college. In 2015, 67 percent of Latinx students enrolled in college right after high school as compared to 49 percent in 2000."[71]

Educational attainment

There is significant variation in college enrollment and completion within this group. In 2016, college enrollment ranged from 27 percent for Honduran 18- to 24-year-olds to 64 percent for Chilean 18- to

24-year-olds. The percentage of "adults age 25 and older with a bachelor's or higher degree ranged from 9 percent for Salvadoran and Guatemalan adults to 55 percent for Venezuelan adults."[72]

Student population profile: Indigenous students

Self-identification, nationality, and citizenship

- Indigenous students may identify as dual citizens of both the United States and of a tribal nation. Many are intertribal, meaning they have ancestry in or citizenship in more than one tribe. Some identify as multiracial.[73]

- Indigenous ancestry and tribal citizenship do not necessarily correlate. "TCUs do not count individuals as American Indian or Alaska Native through self-identification. Rather, to be counted in this category, the individual must be an enrolled member of a federally recognized tribe or the biological child of an enrolled member of a federally recognized tribe. This definition, therefore, excludes all members of state-recognized tribes and those who do not meet the requirements to be an enrolled member of a tribe. For example, an individual whose biological makeup is 100 percent American Indian or Alaska Native, but who does not meet the minimum blood quantum for any of their family's tribes would not be counted as American Indian or Alaska Native at TCUs."[74]

Enrollment

- "In 2016 the total college enrollment rate for American Indian/Alaska Native 18- to 24-year-olds (19 percent) was not measurably different from their 2000 rate. And the six-year graduation rate for first-time, full-time American Indian/Alaska Native undergraduates who began their pursuit of a bachelor's degree at a four-year, degree-granting institution in fall 2011 was 39 percent, the lowest of all racial and ethnic groups."[75]

- "In 2016, high school graduates of American Indian or Alaska Native and Native Hawaiian or other Pacific Islander descent enrolled in college at less than half the average rate . . . . Only 18.8 percent and 20.4 percent, respectively, were enrolled in college, as compared with 40.9 percent of all high school completers ages 18 to 24."[76]

Motivation and engagement

- A literature review shows that "Native students' persistence is geared to improving life for their families and communities . . . . one of the distinctive factors of the Native students is that they are working not only for themselves but for their community . . . . When attending a mainstream university, they are faced with a completely unfamiliar way of living . . . . Students rated social support as being the most important factor for retention."[77]

- "Respondents at tribal colleges are more likely to take advantage of tutoring services and skill labs than their non-tribal college peers; they are also more likely to participate in service-learning activities and prepare multiple drafts of papers."[78]

Culturally relevant pedagogy

"73 percent (N=1,033) of entering tribal college students report that their college's focus on Native language and culture improves their self image/confidence a lot or a moderate amount."[79]

Gender gaps

College-going women have higher high school GPAs on average than men in every group, except in the American Indian and Alaska Natives student group.[80]

Student population profile: Asian American and Pacific Islander students

A heterogeneous group with several sizable subpopulations

- "The Asian American pan-ethnic label itself obscures the diversity of a population that represents a wide range of languages, religions, socioeconomic levels, political leanings, English proficiency levels, and cultures. In fact, Asian American as a category does not exist in Census data. Rather, 'Asian' is used to denote someone with origins from the Far East, Southeast Asia, or the Indian subcontinent. Within the Asian population, over 20 ethnic subgroups exist, which can further be delineated by language."[81]

How this group is defined and counted changes over time

- "While the U.S. Census Bureau reports data on at least 25 distinct, self-identified Asian American and Pacific Islander (AAPI) groups, data collections at the U.S. Department of Education and our institutions of higher education aggregate AAPI communities under the umbrella categories of 'Asian' or 'Native Hawaiian or Other Pacific Islander.'"[82]

- "The groups currently listed on the Census only as write-in examples under 'Other Pacific Islander' (Tongan, Fijian, Marshallese) and 'Other Asian' (Cambodian, Hmong) are among those that face the lowest educational outcomes of all AAPI groups."[83]

- "Starting with the 1910 census, Asian and Pacific Islander categories other than Chinese and Japanese were identified for the first time in decennial census reports, including, for example, Filipino, Hindu, and Korean. The explicit identification of the entire population by race, without a residual 'Other races' category, continued through 1940 . . . . As an extreme example of inconsistency in the classification by race over time, a person who was included in the Asian Indian category in 1980 and 1990 census tabulations might have been included in different categories previously: Hindu in 1920-1940, Other race in 1950-1960, and white in 1970."[84]

A growing population

- "AAPI communities are growing at a faster rate than any other racial group in the United States. From 2010 to 2018, the Asian American population grew by 28 percent and the Native Hawaiian/Pacific Islander population grew by 19 percent, compared with only 6 percent growth for the total U.S. population."[85]

- "Census data of Asian groups indicate that from 2000 to 2010, the Hmong, Cambodian, and Vietnamese populations experienced a higher percentage of growth compared to the Chinese, Japanese, and Korean populations. By the year 2060, the Census Bureau projects the Asian population will be almost 39 million, over 9 percent of the total U.S. population."[86]

Wide variation in educational attainment

- "Asians rank highest [of racial and ethnic categories studied] in terms of high school graduation and college entrance, persistence, and completion. But relying on aggregate data presents a simplistic and inaccurate picture that ignores disparities within the pan-Asian group. It is not until categories are broken down into subgroups that striking differences emerge. Although Asians are more likely than whites, Blacks, or Hispanics to complete college, only 11 percent of Laotians

and 13 percent of Hmong and Cambodians earn a degree, compared to 34 percent of Korean and 26 percent of Chinese students."[87]

- "Although 11 percent of Asian children under age 18 were living in poverty in 2016, the child poverty rate differed by more than 30 percentage points across the selected Asian subgroups — ranging from 6 percent each for Asian Indian, Filipino, and Japanese children to 37 percent for Bangladeshi children. These differences among subgroups were seen in other measures as well, including college participation and attainment . . . . In 2016, the Asian average college enrollment rate was 67 percent. However, among Asian subgroups, the average college enrollment rate ranged from 23 percent for Burmese 18- to 24-year-olds to 78 percent for Chinese 18- to 24-year-olds."[88]

- "Southeast Asian Americans are far less likely to have attended college than other Asian Americans. About one quarter of Southeast Asian American adults have not graduated from high school, compared to only 12 percent of all Asians and 12 percent of all American adults."[89]

Student satisfaction

"With regard to Asian American students, research indicates that campus environments might pose salient challenges, although results with regard to the magnitude of those challenges are somewhat mixed. For example, Harper and Hurtado (2007) concluded that Asian Americans were generally satisfied with their college experiences relative to other racial/ethnic minority groups; other studies have revealed that Asian American students face salient difficulties within the environments of predominantly white institutions.[90]

Pre-college communities

A 2009 survey comparing Asian American students entering predominantly white colleges or universities from predominantly white high schools and from predominantly minority high schools found that the former found their college or university environments less welcoming and less safe and felt greater stress from prejudice and discrimination. The latter group, however, felt the "model minority myth" more acutely: "Researchers and evaluators therefore should always inquire whether their findings are conditional on particular characteristics, such as pre-college communities."[91]

Debt, financial aid, and perceived value

- "Across all races and ethnicities, the more a person borrows, the lower the perceived quality — up to a point. For very high amounts borrowed, the relationship switches and perceived quality goes up again. Interestingly, Asian and white respondents were more likely to report that their educations were worth the cost when they borrowed small amounts (less than $5,000) than when they did not borrow at all. We encourage future researchers to explore the relationship between perceived value, debt, tuition, and college characteristics."[92]

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