



ASHE-NITE Paper Series

BRINGING VISIBILITY TO THE NEEDS AND INTERESTS OF INDIGENOUS STUDENTS: IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

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ABOUT THE SERIES

With support from Lumina Foundation, the Association for the Study of Higher Education and the National Institute for Transformation and Equity are excited to launch a collection of national papers on critical underserved populations in postsecondary education. The series is one of four initiatives under the leadership of the 2017-2018 ASHE President, Dr. Lori Patton Davis.

The overarching aim of the papers is to synthesize existing knowledge about how to create inclusive and equitable campus environments for underserved populations, and provide recommendations for higher education research, policy, and practice.

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EXECUTIVE SUMMARY

Although Indigenous peoples have existed and governed themselves within their homelands since time immemorial, they are often misunderstood or forgotten today due in part to their relatively small numbers and the history and continued reality of colonization in the U.S. In higher education, Indigenous peoples have been largely left out of institutional data, research, and curricula and, thus, rendered virtually invisible. Unfortunately, the statistics that are available indicate that Indigenous students enroll in, persist in, and complete college at lower than average rates. These inequities have existed for decades, and they will persist as long as Indigenous peoples remain invisible to educational policymakers, practitioners, and researchers alike.

In this report, we bring visibility to what is currently known about American Indians, Alaska Natives, and Native Hawaiians in U.S. higher education. We make efforts in particular to highlight what we know that contributes to or hinders their postsecondary access and success. In the end, we provide several recommendations for further research and for more equitable policy and practice.

Setting the Context

It is important to note that there is no singular Indigenous higher education experience. However, themes in the literature help explain some of the varied experiences among Indigenous students, as well as some of the experiences that they may share.

- **Native Nations as Political Entities.** Key to understanding Indigenous students in higher education is the recognition of the diversity that exists amongst Indigenous people and the political statuses of Indigenous nations in the United States. Tribal nations are political entities and Native college students must be recognized as citizens of sovereign tribal nations. Tribal sovereignty is intimately tied to the status of Native people as the original inhabitants of this continent, including what is now known as the United States.
- **Indigenous Populations across the U.S.** In order to understand Indigenous students, it is important to have a clear picture of Indigenous populations in the U.S. American Indians/Alaska Natives (AIAN) make up about 1.7 percent (approximately 5.2 million) of the total U.S. population. Meanwhile, less than 0.2 percent (nearly 530,000) of the total U.S. population identifies as Native Hawaiian. While it is often assumed that Indigenous people exclusively reside within rural, reservation areas, Indigenous people populate different areas of the United States, including their original homelands, federally designated reservations, reservation border towns, rural communities, and urban areas.
- **Enrollment Patterns.** Indigenous students take a variety of pathways toward participating in higher education. Although they enroll in a variety of institution types, most Indigenous students are enrolled in public institutions. Indigenous women enroll in college at higher

rates than Indigenous men. And, slightly more than half of Indigenous college students enroll full-time.

Factors Influencing Access

Literature suggests that several factors, including socioeconomic status, family and societal expectations, as well as educational policies and practices, may impact Indigenous students' access to higher education in complex ways.

- **Negative environmental influences on academic preparation.** Students' K-12 experiences play an important role in shaping students' preparation for college. Evidence suggests that, even when they complete high school, AIAN students are less likely to have completed important college preparatory courses. This has been attributed to various factors, including lack of encouragement from school counselors, poorly resourced schools, and limited access to college-preparatory courses and ACT/SAT preparation resources.
- **Unmet financial need.** Most Indigenous students receive some form of financial aid. However, many Indigenous students face unmet financial need. Both institutions of higher education and Native nations must seek to better understand and meet the financial aid needs of Indigenous students.
- **Value of Indigenous college access programs.** Indigenous college access programs have emerged as important sources of college readiness for Indigenous students. They are based in Indigenous approaches and help support students in developing college-bound Indigenous identities so that they may find personal and communal value in their college experiences.

Factors Influencing Success

Research points to several factors that may hinder or empower Indigenous students to be successful in college. While the concept of college success for Indigenous students might include persistence and graduation, it might also include other forms of success that are tied to Indigenous ways of knowing, being, and doing.

- **Colonialism and racism.** The literature suggests that Indigenous students often encounter racism and stereotypes on college campuses. Misconceptions and stereotypes that Indigenous students confront in higher education perpetuate issues of invisibility and often lead Indigenous students to feel that they do not belong in college.
- **Invisibility and hypervisibility.** Because of their minoritized status and the racialized misconceptions that they face, Indigenous students sometimes feel simultaneously invisible and hypervisible on college campuses. While invisibility can contribute to the experience of social and academic marginalization, it can also provide students with the cover to maintain their cultural identity without attention from others. Indigenous students may strategically employ (in)visibility tactics to accomplish their college goals.
- **Culturally relevant curricular and co-curricular experiences.** Culturally relevant curricular and co-curricular experiences may help Indigenous students develop and maintain a sense of belonging in college. They validate students' senses of cultural identity and help students know that they do not have to assimilate in order to succeed.

- **Connections to home.** Maintaining connections to home allows Indigenous students to continue their practices of cultural traditions and fulfill their responsibilities to family and community. Thus, home-going behaviors can empower Indigenous students to persist in college, providing them with the support that they need to succeed.
- **A sense of place on campus.** Research indicates that a connection to place on college campuses is critical for Indigenous students. Indigenous centered spaces, such as Native student centers or cultural centers, provide resources to help Indigenous students build relationships, reinforce Indigenous identity, foster a sense of belonging, and create home spaces for Indigenous students.
- **Giving back.** Many Indigenous students are motivated to attend college to gain the necessary tools to help their communities. Through higher education, Indigenous students can attain knowledge and skills that may contribute to self-determination and self-governance in Indigenous communities. In this way, using education as a means of giving back can be understood as an act of nation building and serve as a source of strength for Indigenous students.

Recommendations for Policy and Practice

We offer several recommendations for improving higher education policy and practice in ways that better serve Indigenous students.

- **Develop Partnerships with Native Nations.** Higher education is viewed as a necessary tool for nation building for Native nations. As such, it is important for institutions of higher education to develop meaningful partnerships that honor the sovereign status of Native nations. Many of the points of action we recommend below should be done in collaboration with Native nations and Indigenous communities.
- **Critically Examine How We Use Data to Better Understand Indigenous Students' Experiences in Higher Education.** There is still much more that we need to know about Indigenous students' experiences in higher education. Addressing this issue will require better collection and use of data on Indigenous populations in higher education. We offer several specific recommendations related to data collection and data use among Indigenous peoples:
 - Make efforts to oversample Indigenous populations.
 - Collaborate with Native nations and organizations to determine what data should be collected among Native peoples and how it should be collected.
 - Collect data on tribal citizenship.
 - When feasible and meaningful, collect and report disaggregated data for Indigenous groups.
- **Commit Institutional Support to College Access.** Institutions of higher education must make concerted efforts to make college more accessible and welcoming for Indigenous populations. This involves the following recommendations:
 - Work with Native nations and communities to determine and address access issues.
 - Make intentional efforts to recruit and have a presence within Indigenous communities.
 - Host targeted recruitment days and/or summer bridge programs for Indigenous students.
 - Critically examine current admissions policies and practices for how they might privilege

or hinder some populations over others.

- **Empower Students to Maintain Connections with their Families and Home Communities.** Institutions of higher education must develop policies that are flexible and work to honor the needs of Indigenous students as they relate to family and home. Such policies should:
 - Support the needs of Indigenous students to return home for ceremonies.
 - Focus on family centered activities that are not solely located on college campuses.
 - Allow Indigenous students to practice their cultural and spiritual beliefs, particularly in student housing.
- **Honor Connections to Place.** Institutions should work to understand the history of the land on which they are located and the Indigenous peoples historically and currently connected to that land. To honor connections to place, institutions should actively work to:
 - Develop land acknowledgement policies.
 - Support Indigenous student centers.
 - Create Indigenous places of learning on campus.
- **Provide Students with More Culturally Relevant Curricular and Co-Curricular Experiences.** Curriculum that connects to Indigenous students' lives, communities, and values of reciprocity has been established as an effective approach for educating Indigenous students. In providing more culturally relevant curricular experiences, institutions should:
 - Honor Indigenous knowledge systems.
 - Create internships and service learning opportunities that connect student learning to Indigenous communities.
 - Support Indigenous Studies programs.
- **Train Faculty and Staff to be Culturally Competent.** While it is important for Indigenous students to be able to connect with Indigenous faculty and staff, it is also vital that non-Indigenous faculty and staff take active roles in understanding and supporting Indigenous students. To this end, we suggest the following:
 - Seek support from professional organizations.
 - Provide diversity trainings for faculty and staff.

Recommendations for Research

The fact that Indigenous students continue to face a number of inequities in higher education is telling. Research efforts must seek to develop a more complete picture of Indigenous students, explore emerging trends, and ultimately inform efforts to address persistent inequities in educational attainment for Indigenous students and communities. We make the following recommendations for future research.

Explore Gender Differences in College Enrollment and Attainment among Indigenous Students

Indigenous women are entering college at a higher rate than Indigenous men and make up about 60% of the total Indigenous student population. The shift in enrollment for Indigenous men and women has not been fully explored and is important to understanding future trends in Indigenous student college enrollment. Our understanding of the experiences of Indigenous males in particular remains incomplete. Thus, further research should seek to better understand enrollment patterns for Indigenous males, their pathways to college, and experiences in higher education.

Explore Complexities of Identity among Indigenous Students

Much of the scholarship on Indigenous student identity focuses on cultural identity. However, Indigenous students come to college with multiple identities (e.g. cultural, tribal, geographic, gender, and sexual) that intersect in various ways to shape their unique experiences. Research is needed that explores the intersections of identity for Indigenous students. In particular, the literature is virtually silent on issues related to gender identity and sexual orientation. Thus, future research should address the experiences and needs of Indigenous LGBTQ students.

Assess Campus Climates for Indigenous Students

Literature suggests that Indigenous students often encounter racism and microaggressions on college campuses and that experiences with racism lead them to feel that they do not belong in college. In light of these issues, future research needs to assess campus climates for Indigenous students at institutional and national levels.

Explore Diverse Pathways in Higher Education for Indigenous Students

The pathways of Indigenous students in higher education are varied and may involve periods of stopping out, transfer among multiple institutions, and reverse transfer. Future research should address how Indigenous students and communities create pathways to higher education. Additionally, research should critically examine issues of transfer, reverse transfer, and stop-out for Indigenous students.

Explore Higher Education and Nation Building

While enrollment, persistence, and graduation figures are important, it is also important for researchers to gain a better understanding of how Indigenous students and communities define successful outcomes of higher education. Thus, further research should address the needs of Native nations and Hawaiian communities with regard to higher education and how institutions of higher can serve goals of nation building.

Closing Thoughts

Our aims in writing this report have been to bring visibility to the current state of Indigenous students in higher education and the critical issues they face. We provide critical recommendations for policy, practice, and research that are based in the existing scholarship and our own knowledge and experiences as Indigenous scholars. Inequities in higher education persist for Indigenous students, and, as long as Indigenous peoples remain invisible to policymakers, educational practitioners, and researchers, this trend will continue. We urge policy makers to take up these issues and address the needs and interests of Indigenous peoples in higher education.

INTRODUCTION

According to Deloria and Wildcat (2001), “Indigenous” means to be of a place. There are 573 federally recognized tribes (Federal Register, 2018) as well as several other Indigenous nations that are not currently recognized by the federal government in the United States. Each of these Indigenous peoples, sometimes called Native peoples, are inextricably tied to specific homelands. While Indigenous peoples are often collectively referred to as American Indians, Alaska Native, and Native Hawaiians (Kānaka ‘Ōiwi), there is great diversity among these nations.

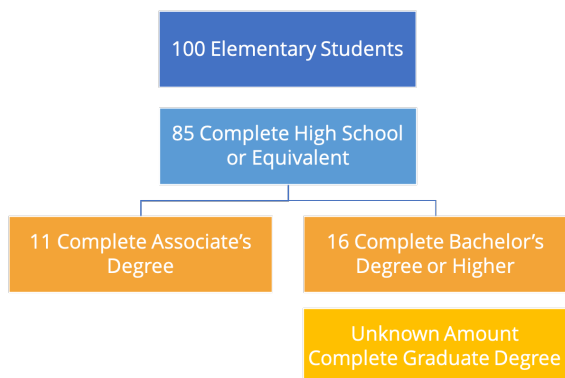
Although Indigenous peoples have existed and governed themselves within their homelands since time immemorial, they are often misunderstood or forgotten today due in part to their relatively small numbers and in part to a history and continued reality of colonization in the U.S.. As a microcosm of the broader society, higher education also often forgets or misunderstands Indigenous peoples. There is relatively little that is known about Indigenous peoples in U.S. higher education. Speaking to this point, Shotton, Lowe, and Waterman (2013) noted that “we [Native peoples] are often excluded from institutional data and reporting, omitted from the curriculum, absent from the research and literature, and virtually written out of the higher education story” (p. 2). Borrowing from Garland (2007), they called this phenomenon the “American Indian research asterisk” (Shotton, Lowe, & Waterman, 2013), where asterisks are used to explain the absence of data concerning Indigenous peoples and thus serve to further reinforce Indigenous peoples’ invisibility. In a review of twenty years of scholarship (between 1991-2011) in the top four higher education journals, out of 2,683 published articles, only 36 (1.3%) addressed Indigenous students (Willmott, Sands, Raucci, & Waterman, 2016). Perhaps as a result of the invisibility of Indigenous people, “[m]ost higher education professionals appear to be unaware of the unique histories – which

We [Native peoples] are often excluded from institutional data and reporting, omitted from the curriculum, absent from the research and literature, and virtually written out of the higher education story.

have present-day realities attached to them – of Indigenous peoples in the United States” (Brayboy, Fann, Castagno, & Solyom, 2012, p. 6).

Unfortunately, available statistics suggest that Indigenous peoples face a number of inequities in U.S. higher education. In 2015, only 15% of American Indians and Alaska Natives (AIAN) age 25 years and older held bachelor’s degrees or higher (U.S. Census Bureau, 2015a), whereas 30% of the general population of adults aged 25 and older in the U.S. held bachelor’s degrees ((U.S. Census Bureau, 2017b). This disparity in college attainment may be the result of disparities in college enrollment and persistence for AIAN students. Despite significant increases in AIAN college enrollment over the last thirty years, AIAN students remain the least likely to be enrolled in college (Brayboy et al., 2012). In 2015, among 18-24 years olds only 23% of AIANs enrolled in college versus 41% of the general population (NCES, 2016b). Additionally, the most recent data indicates that the 6-year graduation rate for AIAN students is 35%, compared to 55% for the general population (NCES, 2017a). Thus, AIAN students are enrolling in college and completing college degrees at rates significantly lower than the general population in the U.S. Figure 1 depicts educational attainment rates among AIAN students.

Figure 1. Educational Attainment for AIAN Students

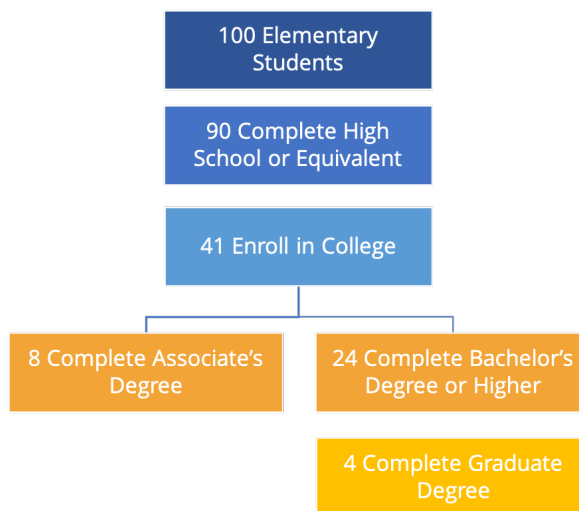


Developing a full picture of how Native Hawaiians are faring in higher education is difficult since national-level, disaggregated data are not readily available. Most recently, the U.S. Census Bureau has reported Native Hawaiian education data along with the data of other Pacific Islander groups, including Micronesians, Melanesians, and other Polynesians. In 2015, 22% of Native Hawaiians and other Pacific Islanders (NHPIs) age 25 and older nationally had completed a bachelor’s degree or higher (U.S. Census Bureau, 2015b). While this represents a four percent increase since 2005 (U.S. Census Bureau, 2017a), it is still well below the percentage (30) of bachelor’s degree earners within the total U.S. population (U.S. Census Bureau, 2017b). The 6-year graduation rate for NHPI students is 43%, still well below the overall population (NCES, 2017a).

Within the state of Hawai‘i, where approximately one-third of all NHPIs live (Hixson, Hepler, & Kim, 2012), more disaggregated educational data for Native Hawaiians are available. In 2009, approximately one in four Native Hawaiians between the ages of 18 and 24 were enrolled in college, compared to one in three 18-24 year olds across Hawai‘i (Kamehameha Schools, 2014). Despite constituting nearly one quarter of the total population in Hawai‘i, Native Hawaiians represented only 17% of all undergraduate students and 13% of all graduate students (Kamehameha Schools, 2014). Moreover, there is a persistent gap in college completion for Native Hawaiians. In 2009, only 14 % of all Native Hawaiians age 25 and

older had completed a bachelor’s degree or higher versus 42% of non-Hispanic Whites in Hawai‘i (Kamehameha Schools, 2014). Figure 2 represents the educational attainment rates among Native Hawaiians in Hawai‘i.

Figure 2. Educational Attainment for Native Hawaiian Students in Hawai‘i



Unfortunately, these inequities are not new. The underrepresentation of Indigenous (American Indian, Alaska Native, and Native Hawaiian) students has consistently remained an issue in higher education. In fact, over a forty year period, the representation of AIAN students has changed little, hovering between .7% and 1% of the total U.S. undergraduate enrollment (NCES, 2017b). And between 2010 and 2016, enrollment of NHPIs dropped from 64,000 (.3%) to 53,200 (.2%) (NCES, 2017b). These trends will persist as long as Indigenous peoples remain invisible to policymakers, educational practitioners, and researchers alike. As Brayboy and colleagues (2012) reminded us, we cannot “ignore statistics and reports that continue to inform us that Indigenous students are not well served by mainstream institutions of higher education” (p. 2).

More must be done to recognize the peoples whose homelands institutions of higher

These trends will persist as long as Indigenous peoples remain invisible to policymakers, educational practitioners, and researchers alike.

education occupy. Understanding the higher education needs and interests of Indigenous peoples is particularly important given the connection between higher education and nation-building for Indigenous peoples (Brayboy et al., 2012). In this report, we bring visibility to what is currently known about American Indians, Alaska Natives, and Native Hawaiians in U.S. higher education¹. We make efforts in particular to highlight what we know that contributes to or hinders their postsecondary access and success. In the end, we provide several recommendations for further research and for more equitable policy and practice.

REVIEW OF LITERATURE

In institutions of higher education, knowledge and understanding of Indigenous peoples is generally limited. This limited understanding has perpetuated a myth of homogeneity among Indigenous student populations (Shotton, 2016) and is compounded by the lack of data available on Indigenous students. Indigenous students are often incorrectly viewed as comprising a homogenous racial group, and broad generalizations are made about their experiences. However, the reality is that Indigenous students represent diverse backgrounds, geographical locations, and experiences. While Indigenous students share some common experiences in higher education, there is not a singular Indigenous higher education experience (Minthorn & Shotton, 2015; Shotton et al., 2013).

Native Nations as Political Entities

Key to understanding Indigenous students in higher education is the recognition of the diversity that exists amongst Indigenous people as well as the political statuses of Indigenous nations in the United States (Shotton, 2016).

¹ Although we focus on American Indians, Alaska Natives, and Native Hawaiians in this report, there is perhaps even less that we know about populations that are Indigenous to U.S. territories, including Guam (Guahan), the Northern Marianas Islands, American Samoa, Puerto Rico, and the U.S. Virgin Islands. While this work is outside of the scope of this particular report, we hope that other scholars will be able to contribute research on these populations in the future.

Unfortunately, available statistics suggest that Indigenous peoples face a number of inequities in U.S. higher education.

Since tribal nations are political entities (Brayboy et al., 2012), Native college students must be recognized as citizens of sovereign tribal nations. Tribal sovereignty is intimately tied to the status of Native people as the original inhabitants of this continent, or what is now known as the United States. Tribal nations had their own systems of rule and forms of governance long before contact with European colonizers, and tribal nations continue to exercise their own governments today (Shotton, 2016). Through processes of treaty making between the U.S. and tribal nations, Native American Tribes share nation-to-nation relationships with the U.S. federal government (Deloria & Lytle, 1983). Likewise, tribal nations share government-to-government or sovereign-to-sovereign relationships with state governments as well. This has particular relevance for public institutions of higher education, as state entities, and their relationships with tribal nations and their citizens.

Since tribal nations are political entities (Brayboy et al., 2012), Native college students must be recognized as citizens of sovereign tribal nations.

Like AIAN peoples do with lands and natural resources of the North American continent, Native Hawaiians share ancestral ties with the lands and natural resources of the Hawaiian archipelago. They developed a society across the Hawaiian islands that flourished according to cultural and political systems that tied people to one another, the natural world, and the spiritual realm (Kame‘eleihiwa, 1992; Stannard, 1989). By the 1840s, the Hawaiian Kingdom became recognized among the world’s family of nations through the development of diplomatic relationships and treaties (Perkins, 2006). In spite of this, the Hawaiian Kingdom was

illegally overthrown in 1893 through the efforts of American businessmen and was later annexed by the U.S. government (Good-year-Ka'ōpua, Kauai, Maioho, & Winchester, 2008; Trask, 2000). No formal treaties were signed in this process. So, while Native Hawaiians continue to reserve the rights to self-determination and self-governance as an Indigenous people (Trask, 1999), these rights have been largely denied by the U.S. government for more than a century.

Perhaps due in part to the geographic location of Hawai'i, Native Hawaiians have been racialized differently than AIANs. They are often grouped together with other Pacific Islanders and even Asians and Asian Americans (Salis Reyes, 2018). Nevertheless, American Indians, Alaska Natives, and Native Hawaiians have had similar experiences with colonization. And, despite differences in their political statuses as recognized by the U.S. federal government, they comprise Indigenous nations with interests in sovereignty. When the legal and political statuses of Native peoples are forgotten, so too are their histories and their complex social realities. In order to better understand and support the expectations, goals, and successes of Indigenous students, institutions of higher education (IHEs) must recognize these students' intersecting racial, cultural, and political identities (Salis Reyes, 2014).

Indigenous Populations Across the U.S.

In order to understand Indigenous students, it is important to have a clear picture of Indigenous populations in the U.S. The latest U.S. Census reports that 1.7% (approximately 5.2 million) of the total U.S. population reported their race as American Indian or Alaska Native², either alone or in combination with another race (Norris, Vines, & Hoeffell, 2012). Meanwhile, less than 0.2% (nearly 530,000) of the total U.S. population identified as Native Hawaiian, either alone or in combination with another race (Hix-

2 The term American Indian/Alaska Native is used here and when referring to national data because that is the legal term utilized by the U.S. federal government to refer to tribal people. Throughout this report we utilize the terms Indigenous and Native to more appropriately capture and name ourselves, as American Indian and Alaska Native are terms imposed on us.

Indigenous people populate different areas of the United States, including their original homelands, federally designated reservations, reservation border towns, rural communities, and urban areas alike.

son, Hepler, & Kim, 2012).

One major misconception about Indigenous populations relates to the geographic patterns of where they live (Shotton, 2016). It is often assumed that American Indians and Alaska Natives reside primarily within rural, reservation areas. However, Indigenous people populate different areas of the United States, including their original homelands, federally designated reservations, reservation border towns, rural communities, and urban areas alike (Shotton et al., 2013).

In fact, according to the most recent U.S. Census, the majority (78%) of AIANs actually live outside of American Indian/Alaska Native areas, which may include federal reservations, off-reservation trust lands, state reservations, and other Alaska Native and tribal statistical geographical areas³ (Norris et al., 2012). And, a large of Native populations are concentrated in urban areas (Norris et al., 2012).

According to 2010 U.S. Census data, nearly 528,000 people (0.2% of the total U.S. population) identified as Native Hawaiian, either alone or in combination with one or more races (Hixson et al., 2012). Like AIAN populations, the geographic distribution of Native Hawaiians extends well beyond their original homelands. Though the majority of Native Hawaiians continue to live in Hawai'i, almost half of Native Hawaiians live within the continental U.S. or Alaska. Outside of Hawai'i, the states with the largest populations of Native Hawaiians include California (75,000), Washington (20,000), Nevada (16,000), Texas (13,000), and Oregon (10,000) (Kamehameha Schools, 2014).

Enrollment Patterns

3 Issues of land for Indigenous populations in the U.S. are intimately tied to our histories with the U.S. federal government, colonization, and policies of removal, allotment, and relocation (Shotton, 2016).

Indigenous students take a variety of pathways toward participating in higher education. The following provides a brief snapshot of Indigenous students' enrollment patterns:

- The majority of AIANs (80%) and NHPI (68%) college students are enrolled in public institutions;
- 12% of AIAN students attend private not-for-profit institutions;
- 10% of AIAN students are enrolled in Tribally Controlled Colleges and Universities (TCU)
- 60% of AIAN and 55% of NHPI college students are women; and,
- 57% of AIAN and NHPI students are enrolled full-time (Aud, Fox, & KewalRamani, 2010; NCES, 2017).

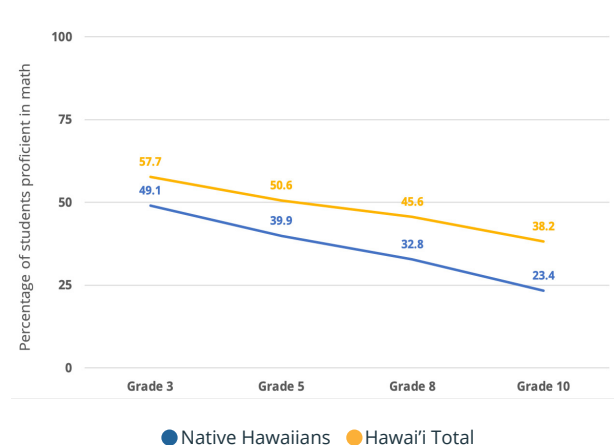
FACTORS INFLUENCING ACCESS

Literature suggests that several factors, including socioeconomic status, family and societal expectations, as well as educational policies and practices, may impact Indigenous students' access to higher education in complex ways (Brayboy et al., 2012). Below we highlight some of the factors that influence Indigenous students' access to and pathways through higher education.

Pre-College Academic Preparation

Students' K-12 experiences play an important role in shaping students' preparation for college. Cabrera and LaNasa (2000) suggest that high school degree completion, college preparatory course enrollment, and access to knowledge related to college application and financial aid processes all impact

Figure 3. Math Proficiency Among Native Hawaiian Students



whether or not students eventually enroll in college. Literature also suggests that culturally relevant course materials and pedagogies shape students' interests and sense of belonging in education (e.g., Deyhle & Swisher, 1997).

K-12 School Contexts

Among AIAN eighth-graders who participated in the National Indian Education Study (NCES, 2017a), the vast majority of students (93%) attended public schools, while much smaller percentages of students (7% and 2%, respectively) attended federally supported Bureau of Indian Education (BIE) schools or other types of schools, including private or Department of Defense schools. Significant differences in reading and mathematics performance were found among students according to the type of schools that they attended. More specifically, students who attended low density public schools (i.e., less than 25% of students identified as AIANs earned higher scores in both reading and math than students who attended high density public schools or BIE schools (NCES, 2017a). In Hawai'i, Native Hawaiian students face widening disparities in mathematics and reading proficiency over time (Kamehameha Schools, 2014). Figure 3 and Figure 4 displays these growing gaps.

School type also matters in terms of the presence of American Indian and Alaska Native teachers. Students who attended public schools with high density Indigenous populations as well as BIE schools were more likely to have teachers who self-identified as AIAN than students who attended low den-

Figure 4. Reading Proficiency Among Native Hawaiian Students

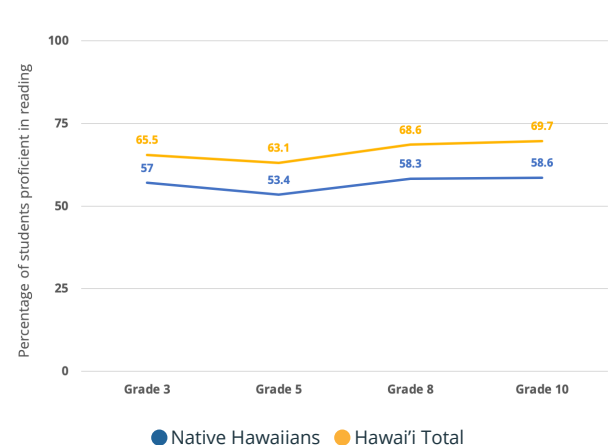


Table 1. Class of 2017 SAT Mean Scores and Benchmark Percentages

Race/Ethnicity	Mean Scores			% Met Benchmark			
	Total	ERW	Math	Both	ERW	Math	None
All	1060	533	527	46	70	49	27
American Indian/ Alaska Native	963	486	477	27	53	29	45
Native Hawaiian/ Pacific Islander	986	489	488	32	57	34	40

sity public schools (NCES, 2017a).

For the 2009 National Indian Education Study, most AIAN students (84%) reported aspirations of attending college either full- or part-time immediately after completing high school (NCES, 2010). However, students who attended high density public schools or BIE schools were more likely to report plans to join the military or to work full-time upon completion of high school than students who attended low density public schools (NCES, 2010). What is most concerning is that the college aspirations of AIAN students is not reflected in actual college enrollment rates (Brayboy et al, 2012).

High school completion and college readiness indicators.

Several indicators suggest a persistent gap in college readiness for Indigenous students. For the 2011-2012 school years, the graduation rate for AIAN students was 67% as compared to the national average high school graduation rate of 80% (Stetser & Stillwell, 2014). Evidence suggests that, even when they complete high school, AIAN students are less likely to have completed important college preparatory courses (Greene & Forster, 2003). This has been attributed to various factors, including lack of encouragement from school counselors, poorly resourced schools, and limited access to college-preparatory courses and ACT/SAT preparation resources. Misperceptions about Indigenous students’ desires and abilities to attend college abound (Waterman et al., 2018), as a result Indigenous students are often less likely to receive encouragement to go to college from high school counselors (Fann, 2005).

Furthermore, Fann (2005) explained that Indigenous students in rural schools typically have access to fewer resources for college entrance exam preparation.

Although numbers have increased in recent years, Indigenous students also remain underrepresented in terms of their participation in Advanced Placement (AP) and college entrance examinations. Of the almost 5 million students who completed AP exams in 2018, only 0.3% (12,459) identified as AIAN and only 0.1% (7,340) identified as NHPI (College Board, 2018). Whereas 59% of all AP exam takers earned a score of three or higher, only 42% of NHPI exam takers and 36% of AIAN exam takers earned a score of three or higher (College Board, 2018). Among the students who took the new SAT test as part of the class of 2017, 0.5% (7,782) identified as AIAN and 0.2% (4,131) identified as NHPI (College Board, 2017). AIANs as well as NHPIs had lower mean scores in evidence-based reading and writing as well as mathematics than the general population (College Board, 2017). Please see Table 1 for further details regarding SAT mean scores and the percentages of students who have met benchmarks in evidence-based reading and writing and mathematics. For the new SAT, “benchmark scores represent a 75% likelihood of a student achieving at least a ‘C’ grade in a first-semester, credit-bearing college course in a related subject” (Hexter, 2016).

Literature suggests that financial resources can partly explain the disparities that exist in Indigenous students’ pre-college academ-

ic preparation. On this note, Waterman and associates (2018) stated:

Native American students often attend poorly resourced secondary schools that are unable to offer the math and sciences necessary to prepare them for postsecondary education. Rural and heavily populated urban schools are rarely funded on par with suburban schools and are populated by minoritized students, including Native students. (p. 8)

Each of these factors impact college access for Indigenous students. However, in the absence of school environments that produce a college going culture some Indigenous communities have worked to develop Indigenous college access programs (Waterman et al., 2018).

Indigenous College Access Programs

When high quality college counseling and academic advising are not otherwise easily accessible, Indigenous college access programs can serve as important sources of college-related information for Indigenous students (Waterman et al., 2018). One such program is College Horizons, which is designed to prepare talented Native youth for the college application and choice process (Keene, 2016, 2018). Its motto, “College pride, Native pride,” illustrates College Horizon’s efforts to cultivate pride both in attending college and in maintaining senses of Native identity among its participants (Keene, 2014). More specifically, the College Horizons curriculum incorporates knowledge about college and the application process, including finding schools that fit one’s skills and interests, completing application and financial aid forms, writing college essays, and preparing for interviews, as well as opportunities to share cultural knowledge and to discuss issues of Native identity and citizenship (Keene, 2014). The goal is to help students to develop college-bound Native identities so they may find personal and communal value in their college experiences (Keene, 2018).

Financial Aid

Given the continually escalating costs of college tuition, financial aid can provide an important point of access into higher educa-

Several indicators suggest a persistent gap in college readiness for Indigenous students.

tion for students. Research has shown that financial aid shapes students’ perceptions of the costs of attending college, which thereby also influences whether or not as well as where students ultimately to enroll (Perna, 2008, 2010). There is still relatively little research that investigates the significance of financial aid among Indigenous students in particular (Nelson, 2018). However, statistics indicate that Indigenous families may need support in financing higher education. DeVoe and Darling-Churchill (2008) found that AIANs and NHPs experience higher levels of poverty (26% and 18%, respectively) than Whites (9%). In 2012, the vast majority (87%) of AIAN college students received some amount of financial aid (Nelson & Tachine, 2018). Sources of financial aid for Indigenous students may include need-based and merit-based grants from the federal government, state governments, and private entities; federal and state loans; federal work study; and tribal scholarships (Nelson, 2018). However, Nelson and Tachine (2018) debunk the myth that all Indigenous students attend college for free. Context matters in terms of what streams of funding are available to students, and many Indigenous students face unmet need. Nelson and Tachine (2018) urged that both institutions of higher education and Native nations must seek to better understand and meet the financial aid needs of Indigenous students.

FACTORS INFLUENCING SUCCESS

Research points to several factors that may hinder and/or empower Indigenous students to be successful in college. While college success for Indigenous students might include persistence and graduation, it might also include other forms of success that are tied to Indigenous ways of knowing, being, and doing. Below we highlight some of the factors that help or hinder Indigenous stu-

dents along their pathways through college.

Colonialism and Racism

Higher education has a complicated history with colonialism and racism. In his work, B. Wright (1991) sheds light on how some of America's first institutions of higher education aimed to educate and civilize Indigenous students through projects of assimilation. Though many Native people resisted these efforts, many of those who did attend these colleges became "marginal men," rejected by European Americans for their race and by Native peoples for their adoption of European American customs (B. Wright, 1991). This history continues to set the tone for the colonialism and racism that Indigenous students to face in U.S. higher education today.

For Indigenous students, experiences with racism often lead them to feel that they do not belong in college.

Literature suggests that Indigenous students often encounter racism and stereotypes on college campuses. Because populations of Indigenous peoples across the U.S. are relatively small, many Americans have not personally interacted with people who are Indigenous (Pewewardy, 1994). And, perhaps due in part to this lack of personal interaction, misconceptions and stereotypes of Indigenous peoples are common. Some misconceptions and stereotypes that Indigenous students confront in higher education might include the idea that Indigenous peoples no longer exist, that all Indigenous peoples share the same culture, that all Native nations have casinos and can attend college for free, and that all Indigenous students are stoic, shy, and silent (Keene, 2016;

Minthorn & Shotton, 2015). Indigenous students often encounter misconceptions and stereotypes in the form of microaggressions (Shotton, 2017; Tachine, Cabrera, & Yellow Bird, 2017). Though each individual instance might seem slight, over time they accumulate and can meaningfully and materially impact personal well-being (Pierce, 1995). For Indigenous students, experiences with racism often lead them to feel that they do not belong in college (Tachine et al., 2017).

Invisibility and Hypervisibility

Because of their minoritized status and the racialized misconceptions that they face, Indigenous students sometimes feel simultaneously invisible and hypervisible on college campuses. Such invisibility and hypervisibility can impact Indigenous college students in complex ways. To this end, Brayboy (2004) found that while the hypervisibility that comes from being one of few Indigenous students on campus could lead to increased surveillance and marginalization, it also can provide students with a platform to participate in activist and advocacy activities that contribute to the well-being of Indigenous communities. On the other hand, while invisibility could contribute to the experience of social and academic marginalization, it could also provide students with the cover to maintain their cultural identity without attention from others (Brayboy, 2004). Indeed, Indigenous students may strategically employ (in)visibility tactics to accomplish their college goals, which are related to their senses of both cultural integrity and academic achievement. To this end, Covarrubias and Windchief (2009) have pushed back against misconceptions of Indigenous students as being inherently silent. Instead, they discovered that Indigenous students may sometimes utilize silence in purposeful ways. This could be to assert their senses of Indigenous identity, to protect Indigenous knowledge and ideas, and to preserve Native ways of communicating.

Culturally Relevant Curricular and Co-Curricular Experiences

For many Indigenous students, culturally relevant curricular and co-curricular experi-

The vast majority (87%) of AIAN college students received some amount of financial aid.

ences can be important. Such experiences empower students to engage in cultural practices and cultivate traditional knowledge. For example, Kupo (2010) found that cultural activities, such as hula, speaking ‘ōlelo ‘Ōiwi (Hawaiian language), and taro cultivation, help to strengthen Native Hawaiian students’ understandings of Hawaiian values while in college. It is also crucial that Indigenous students be able to engage in their spiritual practices through college as spirituality may offer Indigenous students with a vital source of strength (Shield, 2009). Drywater-Whitekiller (2010), for instance, found that some Native students discuss prayer as a vital source of strength through the college process. And Lee (2009) found that curriculum that connects to Indigenous students’ lives, communities, and values of reciprocity is an effective approach for educating Indigenous students.

On the whole, culturally relevant curricular and co-curricular experiences can help Indigenous students develop and maintain a sense of belonging in college. They validate students’ senses of cultural identity and help students to know that they do not have to assimilate in order to succeed. This is important as there is evidence to suggest that Indigenous students who feel that they can obtain knowledge and skills through college and still maintain a strong sense of Indigenous identity might be more likely to persist (Huffman, 2001).

Connections to Home

Research has consistently found family to have an important influence on Indigenous student persistence (e.g., Gloria & Kurpius, 2001; Guillory, 2009; Guillory & Wolverton, 2008; HeavyRunner & DeCelles, 2002; Makomenaw 2014; Waterman, 2012). Often, family provides Native students with vital support, encouragement, and motivation to enter into and persist in college (HeavyRunner & DeCelles, 2002; Guillory & Wolverton, 2008). In complicated ways, however, family can also sometimes pull Native students away from persisting in college (Jackson & Smith, 2001; Lee, Donlan, & Brown 2010; Waterman, 2012). Recently, Lopez (2018)

suggested that “family alone does not predict persistence” (p. 805). Rather, he proposed that factors such as community support (tribal and institutional) and desire to give back are moderated by family support. To maintain relationships to their families and home communities, some Native students choose to enroll in institutions located in close proximity to home or to make frequent trips home (Kealoha, 2012; Waterman, 2012). By doing this, they are able to continue to practice cultural traditions and to fulfill their responsibilities to others (Waterman, 2012). Waterman (2012) argued that home-going behaviors can empower Native students to persist in college, providing them with the support that they need to succeed.

A Sense of Place on Campus

Indigenous students thrive when they are able to maintain relationships at home and to forge new relationships on campus. (Bosse, Duncan, Gapp, & Newland, 2011; Hokoana, 2010; Kealoha, 2012). Shotton, Oosahwe, and Cintrón (2007), for example, discovered that Indigenous peer-to-peer mentoring supported students in three key ways: one, helping students to connect with a network of other Native students; two, through providing emotional and academic support; and, three, through providing guidance regarding goal, leadership, and personal development. Lundberg and Lowe (2016) posited that faculty can play important roles in supporting learning among Indigenous college students through quality academic advising, feedback that pushed students to work hard, and coursework emphasizing analysis, application, and diverse perspectives. Building relationships with peers, faculty, and staff can help Indigenous students to maintain senses of cultural integrity and to feel that they belong on campus.

Indigenous students may strategically employ (in)visibility tactics to accomplish their college goals.

Research indicates that a connection to place on college campuses is critical for Indigenous students. Indigenous centered spaces, such as Native student centers, cultural centers, or Native resources offices, serve to provide resources, help Indigenous students build relationships, reinforce Indigenous identity, foster a sense of belonging, and create home spaces for Indigenous students (Flynn et al., 2012; Guillory, 2009; Joseph & Windchief, 2015; Minthorn, 2015; Shotton, Oosahwe, & Cintrón, 2010; Tachine et al., 2017). As Joseph & Windchief (2015) explained, such spaces serve to help students “claim higher education as an Indigenous space” (Windchief & Joseph, 2015, p. 267).

Giving Back

According to Waterman and associates (2018), Native students are consistently told “that education is ‘a ladder,’ a ‘weapon,’ a tool their communities need to combat historical atrocities and identify and create solutions to the challenges facing their tribal nations” (p. 2). This message helps to frame why research has consistently found giving back to play a role in the college experiences of Indigenous students. Many Indigenous students are motivated to attend college so that they may become equipped with tools they can use to give back to their communities in myriad ways (Brayboy, 2006; Guillory, 2009; Huffman, 2011; Shield, 2009). Through higher education, Native students can attain knowledge and skills which may contribute to self-determination and self-governance in Native communities (Brayboy, 2006). In this way, using education as a means of giving back can be understood as an act of nation building (Salis Reyes, forthcoming).

To maintain relationships to their families and home communities, some Native students choose to enroll in institutions located in close proximity to home or to make frequent trips home.

Culturally relevant curricular and co-curricular experiences can help Indigenous students develop and maintain a sense of belonging in college.

Native students seek to give back in different ways, from serving as role models for Native youth to breaking negative stereotypes of Native peoples (Drywater-Whitekiller, 2010; J. P. Guillory, 2008; R. M. Guillory & Wolverton, 2008). Indigenous college students may seek training in various disciplines and forge careers in different fields (Salis Reyes, forthcoming). However, in however they choose to give back, they do so both to honor previous generations and to contribute to the continued well-being of future generations (Salis Reyes, forthcoming). For Indigenous college students, such motivations and commitments to give back may also serve as a source of strength to persist in the face of difficulties (e.g., Brayboy, 2004; Drywater-Whitekiller, 2010). Perhaps reflecting this idea, Lopez (2018) recently found the desire to give back to be a predictor of academic performance and persistence among Native college students. More specifically, when Native college students held goals to give back to their peoples, they were found to be more likely to persist from the first semester into the second semester and to earn higher GPAs (Lopez, 2018).

RECOMMENDATIONS FOR POLICY AND PRACTICE

Brayboy (2005) argued that “no research should be conducted with Indigenous Peoples that is not in some way directed by a community and aimed toward improving the life chances and situations of specific communities and American Indians writ large” (p. 440). Therefore, in light of the literature we have reviewed above, we offer several recommendations for improving higher education policy and practice in ways that better serve Indigenous students.

Critically Examine How We Use Data to Better Understand Indigenous Students' Experiences in Higher Education

As we have argued above, there is still much more that we need to know about Indigenous students' experiences in higher education. This is vital if policymakers, practitioners, and researchers are to work together to address the persistent gaps in college enrollment and attainment that exist for Indigenous populations. Addressing this issue will require better collection and use of data on Indigenous populations in higher education. Faircloth, Alcantar, and Stage (2015) delineated five problems that have impacted the limited use of large-scale data sets on understanding issues related to Indigenous peoples. These include:

- Discrepancies between how Native nations may determine membership and how individuals may self-identify as Indigenous;
- Possible masking of between-group differences among diverse Indigenous peoples;
- Limited access and entrée into Indigenous communities for the purpose of research;
- Need for culturally appropriate strategies for increasing Indigenous representation in data sets; and
- Small sample sizes of Indigenous students.

Waterman and associates (2018) note that these issues may be further compounded by the the introduction of multiple race options to national data reporting in 2010. While individuals may now choose more than one racial group, data are often reported for AIANs alone or for two or more races. A

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Using education as a means of giving back can be understood as an act of nation building.

potential unintended consequence of the multiple race option and how it is reported within institutions is that it masks the presence of AIANs who report more than one race. That is, AIAN students who indicate they are AIAN in combination with another race are often lumped in the category of "two or more races". This has led to fewer students being identified as AIAN in large-scale data sets, further compounding the problem of the Native American research asterisk (Waterman et al., 2018). It is likely that this also presents an issue for Native Hawaiian reporting given that the majority of Native Hawaiians identify as being of multiple races (Kamehameha Schools, 2014).

Develop Partnerships with Native Nations

Higher education is viewed as a necessary tool for nation building for Native nations (Brayboy et al., 2012). As such, it is important for institutions of higher education to develop meaningful partnerships that honor the sovereign status of Native nations. Indeed, many of the points of action we recommend below should be done in collaboration with Native nations and community organizations. In the end, such partnerships can be mutually beneficial for Indigenous students, Native nations, institutions of higher education, and society at large.

Make Efforts to Oversample Indigenous Populations

Small sample size has consistently been identified as an issue for Indigenous populations in higher education research, resulting in the problem of the research asterisk for Indigenous people (Shotton et al., 2013). Oversampling may help to increase sample sizes of Indigenous populations, helping to minimize standard errors and issues of statistical significance (Faircloth et al., 2015; Lavelle et al., 2009). The implementation of more culturally appropriate sampling and

data collection strategies may be essential in such efforts.

Collaborate with Native Nations and Organizations to Determine what Data Should be Collected Among Native Peoples and How it Should be Collected

As research has been used historically in ways that have hurt Indigenous communities (Smith, 1999), it is vital that Indigenous nations have a say in how research is conducted among their people. Faircloth and associates (2015), for instance, noted that agreements should be made between Native nations and the agencies or organizations conducting research. Such agreements should explain “what information will be collected, how it will be used, and the ways confidential information will be protected” (Faircloth et al., 2015, p. 16).

Collect Data on Tribal Citizenship

As Faircloth et al. (2015) suggested, there may be discrepancies between how Tribal/ Native nations determine membership and how individuals self-identify. That is, an individual may self-identify as Indigenous but may not be an enrolled citizen of a Native nation; as tribal citizenship is determined by each Native nation and varies greatly from tribe to tribe. For this reason, it is important that institutions consistently collect data on tribal citizenship when individuals identify as AIAN in institutional data reporting documents. At a minimum institutions should ask if individuals who identify as AIAN are 1) enrolled tribal citizens and 2) in which tribe they are enrolled.

When Feasible and Meaningful, Collect and Report Disaggregated Data for Indigenous Groupss

As we noted earlier, gathering clear picture

Addressing this issue will require better collection and use of data on Indigenous populations in higher education.

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of the state of education for Native Hawaiians, in particular, is difficult given how Native Hawaiians have been categorized among NHPs and often still among Asian American/ Pacific Islanders. And, while the AIAN category may offer useful data, it may also mask differences between American Indians and Alaska Natives and, even further, various tribal groups. Collecting and reporting more disaggregated data will help to provide more nuanced understandings of the diversity that exists among Indigenous populations. Additionally, colleges and universities should work with Native nations and Native Hawaiian communities to report data on Indigenous student enrollment, persistence, and graduation.

Commit Institutional Support to College Access

While we noted above that Indigenous college access programs can play an important role in helping Indigenous students to develop college-going Indigenous identities, institutions of higher education must also take active measures to make college more accessible and welcoming for Indigenous populations. On this note, Brayboy and associates (2012) posited that “[i]nstitutions must assess how they recruit Indigenous students” (p.116). We offer several more specific recommendations for how institutions can better support college access for Indigenous students:

Work with Native Nations and Communities to Determine and Address Access Issues

As we note above, it is essential that institutions of higher education work with Native nations and communities to better meet the needs of Native students. This starts with the issue of access and is critical given the stake that Native nations have in the education

of Indigenous students as a function of nation building. Indigenous communities have specific knowledge about the needs of their students. Engaging with Native nations and Indigenous communities provides opportunities for institutions to garner input from the communities about the needs of Indigenous students and Indigenous communities.

- **Make intentional efforts to recruit and to have a presence within Indigenous communities.** Especially since Indigenous students do not always know where to go to gather information regarding college admissions, it is important that institutions of higher education not wait on Indigenous students to find them. Rather, institutions of higher education must make efforts to meet Indigenous students where they are. This may involve going into Indigenous communities and schools with high density Indigenous populations, making connections through community events, and offering comprehensive information about admission requirements and other pertinent information.
- **Host recruitment days and/or summer bridge programs for Indigenous students.** As exemplified by College Horizons (Keene, 2016), Indigenous students benefit from programs that specifically seek to support them in their entrance into college. By offering recruitment days and/or summer bridge programs that specifically target and serve Indigenous students, institutions of higher education can help Indigenous students to feel welcomed on campus and to connect to specific resources on campus prior to the beginning of the academic year. This may help to make for smoother transitions into college for Indigenous students.
- **Critically examine current admissions policies and practices for how they might privilege or hinder some populations over others.** In spite of institutions' best efforts to make them neutral, admission policies and practices can often privilege some groups over others. For instance, as institutions move more of their recruitment

It is vital that Indigenous nations have a say in how research is conducted among their people.

and admissions efforts online, they may still not reach Indigenous students who live in rural areas without adequate access to the internet or who do not have ready access to computers. Institutions must continually review and revise their policies and practices to serve all students.

Empower Students to Maintain Connections with their Families and Home Communities

It has been established that connections to home communities and families are critical for Indigenous students. HeavyRunner and DeCelles (2002) highlight what is at stake for institutions of higher education to recognize the importance of family for Indigenous students as they stated:

When colleges and universities view student attrition as resulting from a lack of individual commitment or ability, these institutions fail to recognize the disconnect between the institutional values and student/family values; hence the real reasons for high attrition rates among disadvantaged students are never addressed. (p. 33).

To better serve Indigenous students then, Waterman (2012) suggested that “the concept of home needs to be redefined and the language of ‘going home’ framed positively rather than negatively” (p. 202) by higher education professionals. Institutions of higher education must develop policies that are flexible and work to honor the needs of Indigenous students as they relate to family and home. Such policies should:

- **Support the needs of Indigenous students to return home for ceremonies.** Institutions should develop university wide policies that provide protections and make accommodations for students to return home to participate in cultural ceremonies. This includes excused ab-

sences from courses and mandates that allow for rescheduling examinations and/or required class work that occurs during the observance of cultural ceremonies.

- **Support the needs of Indigenous students to tend to family responsibilities.** Indigenous students' responsibilities to their families do not end when they enroll in college. Thus, some students may have to find a balance between meeting course expectations and caring for family needs. This could necessitate part-time rather than full-time enrollment, in some cases, or could necessitate stopping out, in other cases. While policies emphasizing on-time graduation may place undue pressure on students to enroll in course loads beyond their capacities, academic advisors must play a role in helping students to strike an appropriate balance. Additionally, information on policies and processes related to stopping out must be readily available to Indigenous students. Institutions of higher education must also make sure not to place undue barriers to students being able to return to school and re-enroll in coursework when they are able.

Institutions of higher education must develop policies that are flexible and work to honor the needs of Indigenous students as they relate to family and home.

dent success. As such, institutions should engage with Indigenous students' families regularly. Family centered activities can not rely on practices that always require families to come to college campuses. Institutions must work to build trust with Indigenous communities and families and this requires that they take activities to Indigenous communities.

- **Allow Indigenous students to practice their cultural and spiritual beliefs, par-**

Institutions of higher education must make efforts to meet Indigenous students where they are.

ticularly in student housing (Minthorn, 2014; Singson et al., 2016). Waterman (2012) suggests that Indigenous students often return home to participate in ceremonies and to maintain spiritual connections. When students are not able to return home it is imperative that they are able to engage in ceremonial practices. This often includes the use of specific sacred plants, medicines, and tobacco. Institutions should review their current policies to assess how they might hinder or better support cultural practices for Indigenous students on campus -- e.g. tobacco policies, smudging policies, etc.⁴

Honor Connections to Place

As we previously stated, the term "Indigenous" means to be of a place (Deloria & Wildcat, 2001). The connection to place for Indigenous students has been addressed repeatedly among Indigenous higher education scholars (Shotton et al., 2013; Tachine et al., 2017). Additionally, all institutions of higher education in the U.S. reside on occupied Indigenous land. It is important to recognize that the lands that colleges and universities occupy are the original homelands of Indigenous peoples. That being the case, Indigenous students are often connected to these lands in deep ancestral, cultural, and historical ways. Institutions should work to understand the history of the land on which they are located and the Indigenous peoples historically and currently connected to that land. To honor connections to place, institutions should actively work to:

- **Develop land acknowledgement policies.** Institutions should start by developing a land acknowledgement statement that

4 For examples of smudging policies please see South Dakota State University's smudging policy at <https://www.sdstate.edu/american-indian-student-center/smudging-policy> or University of Montana's smudging/pipe ceremony policy at <http://www.umt.edu/policies/browse/facilities-security/smudging-pipe-ceremonies>.

recognizes Indigenous peoples as the original inhabitants and stewards of the land. Institutions must also create policies that provide guidance on when and where land acknowledgements should be included (e.g. official university events, meetings, in class syllabi, etc.) and explicitly state the purpose of land acknowledgements. These practices not only honor Indigenous peoples but serve to create awareness about Indigenous histories and recognize colonialism as an ongoing project.

- **Support Indigenous student centers.** Indigenous student centers serve to create safe spaces for Indigenous students and tie to Indigenous values of place. Tachine et al. (2016) asserted that such centers provide important space for Indigenous students and help to create a sense of belonging.
- **Create Indigenous places of learning on campus.** Indigenous communities, including students, faculty, community members, and elders, should be consulted in the process of creating Indigenous places of learning on campus. Such learning spaces should privilege Indigenous knowledge systems and incorporate Indigenous pedagogies. This practice could involve taking students outside of traditional classroom settings. For instance, at the University of Hawai'i at Mānoa, Ka Papa Lo'i o Kānewai provides a space for students and community members to participate in traditional kalo cultivation practices. This practice aligns with the Hawaiian saying, "Ma ka hana ka 'ike," which means, "through doing, one learns."

Provide Students with More Culturally Relevant Curricular and Co-Curricular Experiences

Curriculum that connects to Indigenous students' lives, communities, and values of reciprocity is an effective approach for educating Indigenous students (Lee, 2009). In providing more culturally relevant curricular experiences, institutions should:

- **Honor Indigenous knowledge systems.**

Institutions should review their current policies to assess how they might hinder or better support cultural practices for Indigenous students on campus.

Lipe (2016) contended that, when we engage different ways of knowing, particularly Indigenous ways of knowing, students feel validated. Honoring Indigenous knowledge systems involves privileging Indigenous knowledge in courses, including reading Indigenous scholarship, connecting learning to ancestral knowledge, and acknowledging that Indigenous knowledge takes various forms (e.g. traditional stories, sacred histories, songs, chants, hula, etc.) that expand beyond what is traditionally recognized as knowledge in colonial education systems (i.e. written scholarship). In this process, institutions should involve elders and community members in curricular activities.

- **Create internships and service learning opportunities that connect student learning to Indigenous communities.** Unfortunately, although giving back can be an important, positive force in the college experiences of Indigenous students, Indigenous college students and graduates sometimes face discouragement in their desires and efforts to give back. Cech and associates (2014), for instance, found a mismatch between Indigenous college freshmen's communal work goals and individual work goals that largely characterize Science, Technology, Engineering, and Mathematics (STEM) fields. This mismatch led students to question whether or not they belonged in STEM, to lack motivation, and to believe that they were not performing well academically. These findings suggest that an overemphasis on individual work goals in STEM may contribute to underrepresentation in STEM fields among Indigenous peoples (Cech et al., 2014). Indigenous college graduates may also struggle to actualize their

goals to give back as they are sometimes met with distrust upon returning to their home communities after graduating from college (Guillory, 2008). Such distrust, however, may stem from the historical use of education as a tool forcing assimilation (Wright, 1991). If Indigenous students are more supported in maintaining ties with their home communities, they will be better prepared to apply the knowledge, skills, and networks they develop in college toward the betterment of their communities. Thus, meeting the goals of giving back and nation building. In addition, they may be empowered to maintain long-term relationships that can help to allay issues of trust that come as the result of leaving home to attend college.

- **Support Indigenous Studies programs.** Indigenous Studies programs can contribute greatly to Indigenous students' cultural and academic well-being. First, Indigenous Studies programs often provide students with a home-away-from-home, where they are able to connect in a comfortable social environment and meeting space and connect with other Indigenous students, faculty, and staff (Kupo, 2010; Lee, 2009; Wright, 2003). Second, Indigenous Studies programs provide Indigenous students with a chance for self-discovery, where they are able to connect historical and social issues to the experiences of their own families and communities (Lee, 2009; Wright, 2003). And finally, the emphasis of collective rights and responsibilities in the context of nationhood at the center of Indigenous Studies programs connects to Indigenous students' values of reciprocity and goals of serving Indigenous issues, people, and communities (Lee, 2009; Wright, 2003). Indigenous Studies programs should be recognized as important and necessary academic units and institutions should support these academic programs with adequate funding, resources, and faculty.

Train Faculty and Staff to be Culturally Competent

While it is important for Indigenous students

Institutions should work to understand the history of the land on which they are located and the Indigenous peoples historically and currently connected to that land.

to connect with Indigenous faculty and staff, it is also vital that non-Indigenous faculty and staff take active roles in understanding and supporting Indigenous students. This is especially important since Indigenous people are underrepresented among university faculty and staff (McFarland et al., 2017). As previously indicated, Indigenous students often encounter misconceptions and stereotypes in the form of microaggressions (Shotton, 2017; Tachine et al., 2017). These experiences are not limited to interactions with peers and often include negative experiences with faculty and staff (Shotton, 2017). Because they play a critical role in the experiences of Indigenous students, it is important that non-Indigenous faculty and staff are trained to serve Indigenous students in culturally competent ways. To this end, we suggest the following:

- Seek support from professional organizations. Waterman & Harrison (2017) suggest that professional organizations can provide a space to integrate Indigenous ways of knowing into student affairs practices. Professional organizations can also provide opportunities for staff to think about their responsibilities to engage in culturally competent ways and can provide resources for professional development.
- **Provide diversity trainings for faculty and staff.** Diversity trainings can provide faculty and staff with opportunities to reflect upon their own biases and to recognize others' perspectives. Through such reflection, faculty and staff can develop communication and other skills through which they can better support Indigenous students. Because of issues with invisibility, non-Indigenous faculty and staff often lack knowledge about the

unique status of Indigenous people and their histories. Thus, trainings should address issues of sovereignty and colonialism in the context of higher education.

RECOMMENDATIONS FOR RESEARCH

While the body of research on Indigenous students is growing, our understanding of Indigenous students remains incomplete. The fact that Indigenous students continue to face multiple inequities in higher education, including low enrollment and graduation rates, is telling. Research efforts must seek to develop a more complete picture of Indigenous students, explore emerging trends, and ultimately inform efforts to address persistent inequities in educational attainment for Indigenous students and communities. We make the following recommendations for future research.

Explore Gender Differences in College Enrollment and Attainment among Indigenous Students

Over the past 30 years there has been a shift in representation of Indigenous men and women in higher education. More specifically, there has been a four-fold increase in the number of Indigenous women earning degrees at all levels of postsecondary education (Devoe, Darling-Churchill, & Snyder, 2008). Indigenous women are now entering college at a higher rate than Indigenous men and make up about 60% of the total Indigenous student population (Musu-Gillette et

If Indigenous students are more supported in maintaining ties with their home communities, they will be better prepared to apply the knowledge, skills, and networks they develop in college toward the betterment of their communities.

It is also vital that non-Indigenous faculty and staff take active roles in understanding and supporting Indigenous students.

al., 2016). The shift in enrollment for Indigenous men and women has not been fully explored and is important to understanding future trends in Indigenous student college enrollment. Some scholars have addressed the experiences of Indigenous women in postsecondary education (Castagno, 2005; Shotton, 2008, 2017, 2018; Waterman & Lindley, 2013), but our understanding of the experiences of Indigenous males remains incomplete. Thus, further research should seek to better understand enrollment patterns for Indigenous males and seek to answer the following:

- What are the pathways to college for Indigenous males? What barriers to higher education do Indigenous males encounter? What facilitates their access to higher education?
- What influences the decisions of Indigenous males to not pursue college degrees?
- How do Indigenous males navigate postsecondary education systems? What factors contribute to their persistence and graduation?

Explore Complexities of Identity among Indigenous Students

Identity for Indigenous students is nuanced and complex. Much of the scholarship on Indigenous student identity focuses on cultural identity (Horse, 2005; 2012; Huffman, 2001, 2011). However, Indigenous students come to college with multiple identities (e.g. cultural, tribal, geographic, gender, and sexual) that intersect in various ways to shape their unique experiences. The scholarship has yet to fully explore this. Furthermore, the scholarship is virtually silent on issues of gender identity and expression and sexual orientation among Indigenous students. Indigenous students as a whole are mar-

ginalized and rendered invisible in higher education; this is magnified for Indigenous LGBTQ students. Research is needed that explores the intersections of identity for Indigenous students. In particular, research should address the experiences and needs of Indigenous LGBTQ students.

Assess Campus Climates for Indigenous Students

In institutions of higher education, knowledge and understanding of Indigenous peoples is generally limited. Furthermore, institutions of higher education have a complex history with Indigenous people that is rooted in colonization, imperialism, and the ongoing project of settler colonialism. This is exemplified by the fact that institutions of higher education reside on occupied Indigenous lands. This frames how Indigenous students encounter U.S. higher education today.

The literature suggests that Indigenous students often encounter racism and micro-aggressions on college campuses and that experiences with racism lead them to feel that they do not belong in college (Tachine et al., 2017). In light of this, future research needs to further assess campus climates for Indigenous students. This should be done both at institutional and national levels. At the national level, we need to examine campus climate for Indigenous students that may not be fully captured in large national data sets that often masks the diversity of Indigenous students.

Explore Diverse Pathways in Higher Education for Indigenous Students

Discussions of access and progression through higher education often employ the term pipeline, but critics argue that the pipeline metaphor does not adequately describe the experiences of Indigenous students (Waterman, et al., 2018). The term pipeline denotes a single access point and a linear path through higher education; however, scholarship demonstrates that this is not the case for many underserved populations, including Indigenous students. Waterman et al. (2018) proposed using the term

The scholarship is virtually silent on issues of gender identity and expression and sexual orientation among Indigenous students.

pathways to more accurately capture the diverse journeys Indigenous students take in higher education. The pathways of Indigenous students in higher education are varied and may involve periods of stopping out, transfer among multiple institutions, and reverse transfer (Waterman, 2007; Waterman & Sands, 2016). More extensive research is needed to explore the various pathways that Indigenous students take in higher education. Future research should address how Indigenous students and communities create pathways to higher education. Additionally, research should explore issues of transfer, reverse transfer, and stop-out for Indigenous students.

While enrollment, persistence, and graduation figures are important, it is also important for researchers to gain a better understanding of how Indigenous students and communities define successful outcomes of higher education.

Explore Higher Education and Nation Building

Research in higher education tends to focus on enrollment, persistence, and graduation as measures of success. Unfortunately, a focus only on these measures can paint a picture of failure for Indigenous students. As we have noted above, statistics point to a number of disparities that Indigenous students face in higher education.

While enrollment, persistence, and graduation figures are important, it is also important for researchers to gain a better understanding of how Indigenous students and communities define successful outcomes of higher education. Thus, further research

Future research should address how Indigenous students and communities create pathways to higher education.

should be done that relates to the following questions:

- What are the needs of tribal nations and Hawaiian communities with regard to higher education? How do these relate to Indigenous peoples' higher education values and goals?
- How do institutions of higher education help or hinder Indigenous populations in meeting their higher education goals?
- How do Native college students, graduates, faculty, and staff engage in nation building?

CLOSING THOUGHTS

Our aims in writing this report have been to bring visibility to Indigenous students and communities when they are often otherwise invisible in higher education. In doing so, we hope to inform policymakers, researchers, and practitioners about the current state of Indigenous students in higher education and the critical issues they face. The literature reviewed provides important insight into the experiences of Indigenous college students. We provide critical recommendations for policy, practice, and research that are based in the existing scholarship and our own knowledge and experience as Indigenous scholars. More importantly, the recommendations provided require that we acknowledge and honor our responsibilities to Indigenous students and communities as the original inhabitants of this land.

The recommendations provided require that we acknowledge and honor our responsibilities to Indigenous students and communities as the original inhabitants of this land.

Inequities in higher education persist for Indigenous students, and the fact remains

that as long as Indigenous peoples remain invisible to policymakers, educational practitioners, and researchers, this trend will continue. As Brayboy and colleagues (2012) reminded us, we cannot “ignore statistics and reports that continue to inform us that Indigenous students are not well served by mainstream institutions of higher education” (p. 2). We urge policy makers to take up these issues and address the needs and interests of Indigenous peoples in higher education.

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