In Search of Institutional Servingness: Institutional Characteristics and Outcomes of Minority-Serving Institutions

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Abstract

Minority-serving institutions (MSIs) are considered models of excellence to support underrepresented racial and ethnic students; however, multiple definitions of MSIs complicate the consumption and production of research on these critical institutions. The U.S. Department of Education (ED) uses set

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criteria to define MSIs, based primarily on enrollment. However, scholars and practitioners have argued for considering factors beyond enrollment, such as equitable student outcomes and institutional markers of a serving culture. This study used descriptive analyses of IPEDS data to explore the extent to which MSIs served their target population. We use national weighted averages to report results on each MSI category compared to all other institutions. We found that MSIs enrolled higher percentages of MSI-aligned students and employed more-significant percentages of MSI-aligned instructional staff. Most MSIs generally retained higher percentages of MSI-aligned students. Most MSIs showed higher completion proportions, though nearly all MSI categories had lower graduation rates among MSI-aligned students. Some MSIs provided institutional aid to higher proportions of students; others provided lower proportions. Findings confirm that enrollment alone cannot be a proxy for servingness. We encourage researchers, practitioners, and government agencies to use more-holistic definitions. We make recommendations for government agencies to remove burdens to researching MSIs.

Keywords: minority-serving institutions (MSIs), quantitative research, higher education, Integrated Postsecondary Education Data System (IPEDS), secondary data

INTRODUCTION

As a growing body of literature continues to center on the outputs and outcomes of minority-serving institutions (MSIs), multiple perspectives have emerged about what it should mean to be an educational institution identified as serving racially minoritized students (García, 2017; García et al., 2019). For example, some scholars argued that, instead of focusing solely on enrollments, MSI identity should also encompass equitable outcomes across graduation and persistence (Contreras et al., 2008; García 2017). Other researchers point to the inclusion of culturally relevant curricula content in the form of established and robust ethnic studies programs as an essential marker of MSIs (Catallozzi et al., 2019; Romero et al., 2020; Wang et al., 2021). Still, some scholars assert that academic outcomes do not go far enough. Instead, these scholars see that a more culturally relevant conceptualization of serving would include increased racial and ethnic identity salience (García et al., 2018; Guardia & Evans, 2008), student engagement (García, 2019), and internally driven organizational identity dimensions (García, 2017; Museus et al., 2018; Nguyen et al., 2018).

To further complicate the process of consuming and conducting research about MSIs, the U.S. Department of Education (ED) includes set criteria to identify MSI status through its grant designation and award process. These criteria also differ by MSI category. Researchers have also self-identified MSI institutions by reviewing enrollment data by race and ethnicity. The enrollment thresholds vary by MSI category, however. These definitions impact the sample institutions included in institutional

structures and outcomes analysis. Since MSIs are increasingly looked at as models of excellence for educating underrepresented racial and ethnic students, it is critical to have a clear understanding of the institutions.

This study uses descriptive analyses of IPEDS data to examine how MSIs serve their target populations. In this research, the term "MSI-aligned" refers to the population for which the institution has MSI status. We sought to clarify the extent to which select factors of servingness are embodied at federally funded MSIs. Two questions guided our inquiry: (1) To what extent are institutional servingness characteristics (e.g., enrollment, instructional staff, institutional aid) reflected at federally funded MSIs? and (2) To what extent are MSI-aligned student outcomes (e.g., completion, graduation) reflected at federally funded MSIs?

The significance of the results of this study is two-fold. First, results provide a basis for understanding what factors contribute to the characteristics, practices, and success of MSIs. While the results are shared individually per MSI category, an observational comparison between MSIs can be made. We heed awareness of the structural inequities within all systems and structures that are racialized and proceeded with this project to reduce harm by intentionally not comparing MSI categories. Indeed, Ray (2019) theorized that the racialization of structures is rooted in whiteness, diminishes the agency of non-white structures, and results in the unequal distribution of resources. The historical and inclusionary need for MSIs suggests that higher education is racialized, and research should not exacerbate inequities (Bhatt, 2013; Bonilla-Silva, 1997; Bussey, 2022; Hegji, 2017; Ray, 2019; Tomaskovic-Devey, 1993; Wooten, 2006). Second, this study provides a methodological understanding of the degree to which IPEDS, as a secondary data source, can be used to examine MSIs. In the following sections of this introduction, we briefly describe the emergence of MSIs, the legislative definitions of newer MSIs, and the impact of MSIs on student success.

Emergence of Minority-Serving Institutions

Education leaders in the United States have historically used students' racial and ethnic backgrounds to determine who receives formal education and what kind of formal education they receive (Howard & Navarro, 2016). MSIs were established to meet, and subsequently persisted in meeting, the academic and career development needs of those who have long been excluded from institutions of learning in the United States. The nation's first MSIs, now known as Historically Black Colleges and Universities (HBCUs), and Tribal Colleges and Universities (TCUs), also known as Tribally Controlled Colleges and Universities, or TCCUs, were established to provide higher education opportunities for Black and Native Americans (Gasman et al., 2015; Li & Carroll, 2007). Government funding to support these institutions began in the late 19th century and varied in terms of intended and actual levels of funding provided (Gasman et al., 2015). The passage of the Civil Rights Act in 1964 and the Higher Education Act in 1965 marked the most significant legislative acts that began the federal recognition of and funding for MSIs (Flores & Park, 2013; Gasman et al., 2015). Additional legislative actions, such as the Indian Civil Rights Act (1968), Indian Self-Determination and Educational Assistance Act (1975), additional

classifications of land grant institutions (1994), and several additional iterations of the Higher Education Act in subsequent years all provided additional funding opportunities and recognition for TCUs and other MSIs (Gasman et al., 2015).

More recently, as the number of Asian American, Pacific Islander, and Latin*[1] students entering colleges across the nation has grown, the student populations of many historically white institutions have shifted drastically, prompting an expansion of MSIs and subsequent changes to the definition of MSIs. Newer MSIs were designated as such because a specified percentage of their student population is an identified minority group, and most of their students are categorized as low income (Gasman et al., 2015; Li & Carroll, 2007). This demographic shift in postsecondary enrollment has continued well into the 21st century, as minority student enrollment continues to increase (Flores & Park, 2013). Many of these newer MSIs meet the postsecondary educational needs of students from historically underrepresented, marginalized, or minoritized communities who are continuing their education in historically white educational spaces, preparing them for graduate studies or careers that change their lives and their communities (Gasman et al., 2015; Li & Carroll, 2007; Museus et al., 2018; Núñez et al., 2016).

Legislative Definitions of Newer Minority-Serving Institutions

In current federal MSI legislation, an institution is eligible to apply for federal discretionary funding after it has met specific criteria, such as a minimum enrollment percent of the target student population (e.g., 25% for Hispanic-serving institutions [HSIs], 10% for Asian American and Native American Pacific Islander–serving institutions [AANAPISIs]) and a minimum percent of Pell Grants eligibility among the students (ED, 2018). These institutions should also have comparatively low average expenditures per full-time equivalent student, as well as legal authorization to award associate's or bachelor's degrees, or both (ED, 2018). Such eligibility factors suggest that these institutions typically enroll significant numbers of target student populations and have fewer institutional resources to support their student population. Therefore, the spirit of MSI legislation intends to support institutional capacity building through federal funding programs (Espinosa et al., 2017). Under this definition, more than 700 federally designated MSIs serve students today, representing approximately 14% of all degree-granting, Title IV–eligible higher education institutions (National Academies of Sciences, Engineering, and Medicine, 2019).

Although required ED performance measures for grantees of MSI funding programs may vary from program to program, grantees are generally required to report student persistence rates and graduation rates from the first year to the second year at the same institution. A more detailed review of these performance measures, however, reveals that funded AANAPISIs, Alaska Native and Native Hawaiian–serving institutions (ANNHSIs), Native American–serving nontribal institutions (NASNTIs), and predominantly Black institutions (PBIs) are not required to report these performance measures specifically for their target student populations. Except for the Hispanic-Serving Institutions—Science, Technology, Engineering, or Mathematics (HSI–STEM) Program, funded MSIs are not required to report performance measures on how specific

1. We use the term "Latin*" to refer to people and communities that have historic, social, and geographic roots in Mexico, Central and South America, and the Caribbean. As the usage and understanding of the term varies, we follow Salinas's (2020) recommendation of using Latin*. We use the term "Hispanic" when referencing studies, reports, or data sources that used that term.

racial and ethnic student populations are faring at their institution.

The Impact of Minority-Serving Institutions on Student Success

Researchers reveal distinct and significant differences between MSIs and non-MSIs in practice and outcomes (Contreras & Contreras, 2015; Espinosa et al., 2018; Espinosa et al., 2017; García et al., 2018). When it comes to serving students of color, specifically those from low-income families, studies have shown that MSIs serve proportionally more students of color than non-MSIs (Espinosa et al., 2018; Harmon, 2012). Espinosa et al. (2018) found that HSIs and PBIs serve more than three times their respective populations than is the case with non-MSIs. Despite often having to do more with fewer institutional resources, an increasing body of work shows that MSIs produce more-equitable educational and economic mobility outcomes when compared with non-MSIs (Espinosa et al., 2018; Espinosa et al., 2017). A study using Equality of Opportunity Project data (www.equality-of-opportunity.org/data) from 1,911 institutions, found that MSIs across all categories (4-year and 2-year) accelerated students from the bottom to the top of the income distribution at higher rates than non-MSIs (Espinosa et al., 2017).

Students of color, especially those from low-income backgrounds, generally endure more barriers throughout their educational pursuits (Museus et al., 2015; Patton & Njoku, 2019; Truong et al., 2016). To address these barriers, MSIs create environments and implement practices to meet the needs of underserved students in three distinct ways. First, most MSIs make efforts to maintain low tuition and fees because their population includes more students that are financially disadvantaged due to systemic racial inequities (Harmon, 2012). MSIs also excel in providing their students with a more diverse faculty: Cunningham and Leegwater (2010) found that more than half of the faculty at HBCUs were Black, 24% of faculty at HSIs were Hispanic, and 41% of faculty at TCUs were American Indian. The racial distribution of faculty at MSIs is far more than at all other institutions—5% of faculty were Black, 4% were Hispanic, and less than 1% were American Indian. Diversifying faculty increases role modeling and mentorship opportunities for MSIs' respective students (Bensimon & Dowd, 2012; Castro Samayoa, 2018). Furthermore, MSIs are leaders in weaving heritage and culture into their students' learning experiences (Cunningham & Leegwater, 2010). For example, TCUs embed cultural components from tribal customs and knowledge into their curricula (Crazy Bull et al., 2020). Similarly, HBCUs integrate African American history into various campus practices, curricula, celebrations, and student activities (Williams et al., 2022). Furthermore, HSIs often try to provide students and their families with resources and support to assist with language barriers by offering essential student resources in Spanish (Romero et al., 2020).

As with other postsecondary sectors, no grouping of institutions is monolithic, and contextualizing all MSIs as being the same obscures meaningful variations in their educational purposes, practices, and outcomes. Equally important, not all MSIs have comparable resources. Shrinking public revenues and grant resources for most MSIs means they spend significantly less per student than non-MSIs. Case studies by Cunningham et al. (2014) found that this resource scarcity has meant that MSIs have tended to be more cost-effective and wide-reaching in implementing services and initiatives to increase degree completion. Still, when no consistent contextualization of MSIs exists, it presents

challenges for understanding how MSIs serve the growing number of racially diverse students who enroll in college each year.

METHODS

This project is an extension of a study conducted by an interdisciplinary team of practitioners and scholars who were enrolled in the 2021 NCES Data Institute. We used descriptive analyses of IPEDS data to examine how MSIs serve their target populations and answer our research questions.

Defining Minority-Serving Institutions in This Study

We used the federal definitions of various MSIs for this study (see Table 1). As mentioned, the definition of MSIs in data sets varies widely, often according to how specific scholars operationalized MSI in their study. Current scholarship on MSIs largely follows federal definitions of MSIs to inform their inquiry. Some scholars have used narrower definitions, such as selecting MSIs that received federal designation and funding (e.g., Aguilar-Smith, 2021; Museus et al., 2021), while other scholars have used broader

Table 1. Definitions of Various Minority-Serving Institutions

MSI Category	Acronym	Definition
Historically Black colleges and universities	HBCUs	Any historically Black colleges or universities established prior to 1964 whose primary mission was the education of Black Americans.
Tribal colleges and universities	TCUs	Institutions chartered by their respective Native American tribes through sovereign authority of the tribes or by the federal government with the specific purpose to provide higher education opportunities to Native Americans through programs that are culturally based, holistic, and supportive. Also known as tribally controlled colleges and universities, or TCCUs.
Hispanic-serving institutions	HSIs	Institutions with at least 25% total undergraduate Hispanic full-time equivalent student enrollment.
Alaska Native and Native Hawaiian–serving institutions	ANNHSIs	Alaska Native–serving institutions are institutions that have at least 20% total undergraduate Alaska Native full-time equivalent student enrollment. Native Hawaiian–serving institutions are institutions that have at least 10% total undergraduate full-time equivalent Native Hawaiian student enrollment. These institutions, though distinct, are collectively referred to as ANNHSIs.
Asian American and Native American Pacific Islander–serving institutions	AANAPISIs	Institutions that have at least 10% total undergraduate full-time equivalent Asian American and Pacific Islander enrollment.
Predominantly Black institutions	PBIs	Institutions that serve at least 1,000 undergraduate students, and with at least 40% total undergraduate full-time equivalent African American student enrollment.
Native American–serving nontribal institutions	NASNTIs	Institutions that have at least 10% total undergraduate full-time equivalent Native American student enrollment.

Note: For MSI categories enrollment thresholds listed in this table, it is also expected that at least 50% of an institution's undergraduate students are eligible for need-based financial aid, have low average expenditure per full-time equivalent student compared to similar institutions, and have legal authorization to award associate's and/or bachelor's degrees.

definitions, such as MSIs that meet the enrollment criteria for each student population (e.g., Espinosa et al., 2018). One additional definition of note comes from Excelencia in Education: this national nonprofit defined "emerging HSI" as an institution with a student enrollment between 15% and 24% (Excelencia in Education, 2022). Some studies on HSIs use this definition (e.g., Cuellar & Johnson-Ahorlu, 2020). Such variation makes it difficult for scholars, practitioners, and policymakers to synthesize existing scholarship and to conduct additional research, especially when generating or selecting an appropriate data set.

Data Source

We used two federal data sets—the Integrated Postsecondary Education Data System (IPEDS) (17:18) and the 2020 MSI eligibility and award data provided by the ED (2020). IPEDS is a comprehensive census of all postsecondary education institutions in the United States and related jurisdictions. It is maintained by the NCES, which serves as the "primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations" (NCES, n.d., para 1). The information available through IPEDS includes fundamental areas such as enrollment, program completion and graduation rates, institutional costs, student financial aid, and human resources. Our analysis utilized data from the 2017–2018 data collection cycle, since this was the most complete public-facing data set at the time of analysis. The MSI eligibility and award data is an annually published matrix of all accredited postsecondary institutions according to their eligibility and funding status for each ED MSI program. For each program, institutions are "funded" (currently receiving funding), "eligible" (eligible to apply for and receive MSI funding but not a current grant recipient), "waiver-needed" (eligible to apply for and receive MSI funding but requiring a waiver for enrollment of minority students or low-income students), or "ineligible" (ineligible to apply for and receive MSI funding).

Study Sample

The study sample included public, private, and nonprofit institutions that had been awarded MSI funding as of 2020 (n = 366; ED, 2020). To generate the list of federally funded institutions, we used the 2020 MSI eligibility matrix that synthesized eligibility information based on IPEDS 2018–2019 provisional enrollment data. We created the final sample set of institutions from the MSI eligibility matrix by sorting institutions by status to indicate whether the institution was receiving at least one MSI grant; we included these institutions in the analysis. We also included institutions falling into more than one MSI category in the analysis for each category. The analysis did not include institutions that were eligible to compete for MSI grants but did not receive a grant.

To add a layer of context to our MSI analysis, we created adjusted national comparison groups from the IPEDS universe of institutions for each MSI category. Our comparison category initially included all Title IV, U.S. service, and degree-granting institutions from the 2018 IPEDS universe, excluding administrative units and institutions designated as "less than 2-year" (N = 4138). We excluded all funded MSI-specific institutions from "All Other Institutions" for each MSI comparison, and used those excluded institutions as the comparison group.

Variable Selection

Variables for the study were selected based on extant scholarship exploring institutional characteristics and outcomes within and across MSI categories and informed by prior literature on factors contributing to student success. The study looked at two critical dimensions of MSIs: institutional characteristics and structures of servingness (Bensimon & Dowd, 2012; Cole, 2011; Contreras, 2017; García et al., 2019) and student outcomes (Contreras & Contreras, 2015; Espinosa et al., 2017; García et al., 2019).

Institutional characteristics and structure variables included the MSI-aligned proportion of Fall enrollment, MSI-aligned instructional staff racial representation, and the percentage of first-time/full-time (FT/FT) students receiving institutional aid. Although racial enrollment representation is an essential defining characteristic of most MSI designations (except for HBCUs and TCUs, which are defined by federal legislation), enrollment proportions vary considerably within MSI categories. We utilized the IPEDS-provided derived variables from the Fall enrollment survey component to construct our first variable concerning MSI-aligned undergraduate enrollment by race/ethnicity (e.g., percent of Black students enrolled at an HBCU).

Similar to previous studies, our interest in faculty representation rests on the assumption that faculty—particularly permanent, full-time faculty—are uniquely positioned to foster impactful relationships with students at MSIs (Vargas et al., 2019). To measure MSI-aligned instructional staff representation (e.g., percent of Native American instructional staff at a TCU), we created a derived variable with total and race-specific employment numbers from the IPEDS Human Resources survey (IPEDS, n.d.).

The final variable in this dimension is the percentage of FT/FT students receiving institutional aid. Students may receive aid from various sources in their financial aid packages, including private and government loans, scholarships, and grants from the federal government, state, and their respective institutions. Although many MSI categories require a significant percentage of Pell-eligible students to be enrolled, we sought a variable that would ideally reflect the individual institution's contribution to supporting their MSI-aligned student population. Unfortunately, IPEDS does not disaggregate financial indicators by race, so we included a variable reflecting the overall percentage of FT/FT students receiving aid from their institution.

We heeded the call from previous studies to examine relevant student outcomes that advance a more robust definition of servingness (e.g., García et al., 2019); student outcomes (e.g., grades, transfer, completion) are products of serving structures but are also influenced by individual experiences and external forces. To explore how the distinct institutional characteristics and structures of MSI categories might align with distinct student outcomes, we incorporate variables of MSI-aligned completion proportion and MSI-aligned graduation rates. We also provide Fall-to-Fall retention rates for all students, which is a required outcome to report for most MSIs receiving federal MSI grant dollars. The data definitions for all variables in the study are shown in Table 2.

Table 2. Variable Definitions

Variable Name	Data Source	Definition
MSI-Aligned Student Enrollment Representation	IPEDS Enrollment [EF2018A_RV]	[Continuous] The percent of undergraduate Fall enrollments comprising students identified in the racial group associated with each specific MSI category. *(Ex: The percent of Fall undergraduate enrollment comprising Hispanic students at HSIs.)*
MSI-Aligned Instructional Staff Representation	IPEDS [S2018_IS_RV]	[Continuous] [(Count of MSI-aligned instructional staff / total count of instructional staff) *100] The percent of instructional staff comprising individuals identified in the racial group associated with a specific MSI category. *(Ex: The percent of instructional staff identified as Native American individuals at TCUs.)*
Fall-to-Fall Retention Rate for All Students	IPEDS Fall Enrollment [EF2018D_RV]	[Continuous] The percent of the entire (i.e., all races) Fall full-time cohort from the prior year (minus exclusions from the Fall full-time cohort) that reenrolled at the institution as either full- or part-time students in the current year.
Percent of FT/FT Students Receiving Institutional Aid	IPEDS [SFA1718_RV]	[Continuous] Percent of all FT/FT degree- or certificate-seeking undergraduate students who were awarded any institutional aid.
MSI-Aligned 150% Graduation Rate	IPEDS Completions [DRVGR2018_RV]	[Continuous] The 6-year graduation rate for FT/FT students identified in the racial group associated with each specific MSI category. *(Ex: The 6-year graduation rate for Alaska Native and Native Hawaiian students at ANNHSIs.)*
MSI-Aligned Completion Proportion	IPEDS Completions [C2018_B_RV]	[Continuous] [(Awards conferred by race/ethnicity/total awards conferred) *100] The percent of total completions (degrees or certificates) conferred to students identified in the racial group associated with each specific MSI category. *(Ex: The proportion of total completions conferred to Asian American students at AANAPISIs.)*

Analysis

We used descriptive analysis from the IPEDS database. Descriptive statistics is an appropriate method to explore our research questions because it provides an in-depth understanding of the population by describing the participants in the study (e.g., number and characteristics) and by identifying underlying patterns regarding specified variables. Descriptive results help interpret seemingly complex or significant amounts of raw data. Our study incorporates standard deviation as a measure of dispersion to help bring clarity to the MSI data. We created and used weighted averages to calculate metrics to account for differences in student success metrics across different institutional types and sectors (see Table 3). This analysis's findings are descriptive and do not imply causality or identify reasons for the trends or differences observed.

Table 3. Institutional Type and Sector Weights

MSI Category	AANAPISI		ANNHSI		HBCU		HSI		NASNTI		PBI		TCU	
4-Year	*W*	N	*W*	N	*W*	N	*W*	N	*W*	N	*W*	N	*W*	N
Doctorate														
Public	*0.75*	9	*0.38*	3	*0.31*	26	*0.28*	25	*0*	0	*0.40*	4	*0*	0
Not for Profit	*0*	0	*0.13*	1	*0.07*	6	*0.17*	15	*0*	0	*0*	0	*0*	0
For Profit	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0
Master's														
Public	*0*	0	*0.13*	1	*0.12*	10	*0.13*	11	*0.5*	1	*0.20*	2	*0.25*	4
Not for Profit	*0*	0	*0.13*	1	*0.14*	12	*0.20*	18	*0*	0	*0.40*	4	*0.06*	1
For Profit	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0
Bachelor's														
Public	*0.25*	3	*0.25*	2	*0.05*	4	*0.2*	18	*0.50*	1	*0*	0	*0.44*	7
Not for Profit	*0*	0	*0*	0	*0.31*	26	*0.01*	1	*0*	0	*0*	0	*0.25*	4
For Profit	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0	*0*	0
Total	*1.0*	12	*1.0*	8	*1.0*	84	*1.0*	88	*1.0*	2	*1.0*	10	*1.0*	16
2-Year														
Associate's														
Public	*1.0*	11	*1.0*	4	*0.92*	11	*1.0*	82	*1.0*	4	*1.0*	23	*0.89*	17
Not for Profit	*0*	0	*0*	0	*0.08*	1	*0*	0	*0.0*	0	*0*	0	*0.11*	2
For Profit	*0*	0	*0*	0	*0*	0	*0*	0	*0.0*	0	*0*	0	*0*	0
Total	*1.0*	11	*1.0*	4	*1.0*	12	*1.0*	82	*1.0*	4	*1.0*	23	*1.0*	19

Limitations and Delimitations

There are a few critical limitations to our study that are worth discussing. First, although IPEDS administrators regularly undergo data integrity procedures, we navigated incomplete data where some values were zero and others were null. Where values were zero, we double-checked to assess if the value was indeed zero and not an error. A second limitation is that there are smaller sample sizes for specific MSI categories. We encourage readers to interpret this small sample size beyond statistical significance and within a larger context of postsecondary institutions and the complexities of securing federal designation and funding.

Decisions concerning variable selection and disaggregation also presented important delimitations to our study. Although our focus on FT/FT metrics is consistent with previous studies on organizational outcomes, such metrics are limited in providing a complete picture of outcomes for racially marginalized students classified as transfer or part-time. Additionally, our study disaggregated institutions by sector and control, but we reported findings only by sector due to interest and brevity.

FINDINGS

We organized the results of the analysis by MSI category below. For each category, we highlight differences within and across MSI categories. It is important to note that we made an explicit decision to present each MSI category holistically in addition to drawing comparisons between MSI categories and all other institutions. To help bring additional context to the essential dimensions of MSIs, we present national averages for all six variables. Tables 4 and

Table 4. Minority-Serving Institution–Aligned 2-year Institutions: Institutional Characteristics and Structures

			MSI-Aligned Student Enrollment Representation		MSI-Aligned Instructional Staff Representation		MSI-Aligned 150% Graduation Rate		MSI-Aligned Completion Proportion	
MSI Category	**Aligned Population**	***N***	**M**	***(SD)***	**M**	**(*SD*)**	**M**	**(*SD*)**	**M**	**(*SD*)**
AANAPISI	Asian	11	21.3	*(11.9)*	13.5	*(6.6)*	34.1	*(16.0)*	23.1	*(13.6)*
All Other	Asian	1348	3.4	*(5.5)*	3.3	*(5.0)*	33.1	*(27.4)*	3.5	*(6.2)*
AANAPISI	NH/OPI	11	0.2	*(0.4)*	0.7	*(1.8)*	14.9	*(20.0)*	0.4	*(0.5)*
All Other	NH/OPI	1348	0.4	*(5.1)*	0.5	*(3.6)*	21.6	*(33.4)*	0.5	*(5.0)*
ANNHSI	AI/AN	4	0	*(0)*	0.8	*(1.0)*	0	*(0)*	0.3	*(0.4)*
All Other	AI/AN	1362	2.7	*(12.1)*	1.4	*(6.6)*	21.3	*(28.2)*	2.8	*(12.3)*
ANNHSI	NH/OPI	4	4.8	*(1.5)*	11.3	*(4.6)*	12.0	*(6.7)*	3.9	*(5.3)*
All Other	NH/OPI	1355	0.4	*(5.1)*	0.4	*(3.5)*	21.5	*(33.3)*	0.5	*(5.0)*
HBCU	Black	12	58.4	*(26.6)*	52.9	*(29.5)*	16.2	*(8.4)*	61.2	*(29.8)*
All Other	Black	1347	13.1	*(3.6)*	6.7	*(1.8)*	20.4	*(5.9)*	11.9	*(3.3)*
HSI	Hispanic	82	48.7	*(15.4)*	15.8	*(11.7)*	25.4	*(8.2)*	45.8	*(16.6)*
All Other	Hispanic	1277	14.8	*(17.6)*	4.5	*(10.0)*	27.5	*(19.6)*	13.1	*(16.8)*
NASNTI	AI/AN	4	20.0	*(10.9)*	8.0	*(4.8)*	24.0	*(12.4)*	19.8	*(6.3)*
All Other	AI/AN	1355	2.6	*(12.0)*	1.3	*(6.6)*	21.2	*(28.2)*	2.7	*(12.2)*
PBI	Black	23	48.3	*(11.0)*	25.4	*(14.2)*	17.9	*(12.2)*	45.5	*(11.2)*
All Other	Black	1336	11.9	*(13.8)*	6.7	*(10.7)*	18.2	*(16.2)*	10.9	*(13.5)*
TCU	AI/AN	19	81.7	*(19.9)*	42.6	*(26.2)*	13.3	*(12.0)*	82.4	*(20.1)*
All Other	AI/AN	1340	1.2	*(0.4)*	0.6	*(0.2)*	23.9	*(7.8)*	1.2	*(2.2)*

Note: AA = Asian American; AN = Alaska Native; NH = Native Hawaiian; OPI = other Pacific Islander; TCU = tribal colleges and universities.

5 display results for variables under the MSI-aligned institutional characteristics and structural dimension by MSI categories and all other institutions by 2- and 4-year institutions. Tables 6 and 7 display results for variables under institutional characteristics and structural dimensions where disaggregation by MSI alignment is unavailable.

Asian American and Native American Pacific Islander–Serving Institutions

AANAPISIs comprised 6% (*n* = 23) funded MSIs in 2020. The group comprises all public institutions and is split between 4-year (*n* = 12) and 2-year (*n* = 11) designations. Concerning institutional

Table 5. Aligned 4-year Minority-Serving Institution Institutional Characteristics and Structures

			MSI-Aligned Student Enrollment Representation		MSI-Aligned Instructional Staff Representation		MSI-Aligned 150% Graduation Rate		MSI-Aligned Completion Proportion	
MSI Category	**Aligned Population**	***N***	**M**	***(SD)***	**M**	***(SD)***	**M**	***(SD)***	**M**	***(SD)***
AANAPISI	Asian	12	21.2	*(10.1)*	16.3	*(5.2)*	55.9	*(19.7)*	18.7	*(9.1)*
All Other	Asian	2767	5.1	*(2.2)*	8.9	*(2.5)*	54.7	*(24.0)*	5.2	*(2.3)*
AANAPISI	NH/OPI	12	4.0	*(12.3)*	2.1	*(6.6)*	45.1	*(19.9)*	4.8	*(15.2)*
All Other	NH/OPI	2767	0.3	*(0.3)*	0.3	*(1.5)*	43.9	*(5.4)*	0.4	*(0.3)*
ANNHSI	AI/AN	8	13.8	*(20.9)*	1.9	*(2.6)*	25.8	*(35.0)*	14.4	*(24.6)*
All Other	AI/AN	2771	1.5	*(0.6)*	0.9	*(0.9)*	41.9	*(16.0)*	1.6	*(0.6)*
ANNHSI	NH/OPI	8	6.0	*(7.1)*	3.8	*(4.1)*	49.3	*(30.2)*	6.0	*(6.9)*
All Other	NH/OPI	2771	0.5	*(0.8)*	0.3	*(0.1)*	44.6	*(16.6)*	0.5	*(0.2)*
HBCU	Black	84	79.7	*(20.0)*	59.0	*(17.0)*	33.6	*(16.3)*	80.2	*(18.1)*
All Other	Black	2695	10.1	*(3.5)*	4.1	*(1.4)*	42.8	*(14.7)*	8.6	*(3.0)*
HSI[a]	Hispanic	88	54.8	*(26.3)*	29.3	*(34.7)*	41.8	*(17.2)*	48.8	*(28.6)*
All Other	Hispanic	2691	12.7	*(4.5)*	5.1	*(1.8)*	45.3	*(16.0)*	10.3	*(3.6)*
NASNTI	AI/AN	2	9.0	*(2.8)*	1.0	*(1.4)*	28.0	*(28.3)*	8.9	*(3.4)*
All Other	AI/AN	2777	3.2	*(1.6)*	1.7	*(0.9)*	34.2	*(17.4)*	3.4	*(1.7)*
PBI[b]	Black	10	49.3	*(13.5)*	24.7	*(14.2)*	31.8	*(11.4)*	45.3	*(16.0)*
All Other	Black	2769	13.0	*(5.9)*	6.3	*(2.9)*	40.4	*(18.4)*	11.6	*(5.3)*
TCU	AI/AN	16	85.6	*(13.5)*	41.9	*(17.7)*	18.4	*(16.3)*	86.7	*(13.6)*
All Other	AI/AN	2763	0.8	*(0.3)*	0.5	*(0.2)*	37.0	*(15.0)*	0.8	*(0.3)*

Notes: [a] University of Puerto Rico Medical Sciences, John F. Kennedy University, and The University of Texas Health Science are graduate-focused HSIs that did not report data for "Percent of FT/FT Students Receiving Institutional Aid" as well as "MSI-Aligned 150% Graduation Rate."
[b] CUNY Graduate School and University Center is a PBI that enrolls less than 1% FT/FT undergraduates. Data for this institution is not reported for either "Percent of FT/FT Students Receiving Institutional Aid" or "MSI-Aligned 150% Graduation Rate." Additionally, Marygrove College was a PBI that stopped enrolling undergraduate students in 2017 and officially closed in 2019. Data for Marygrove College is not reported for "MSI-Aligned Student Enrollment Representation."

Table 6. General 4-year Minority-Serving Institutions: Institutional Characteristics and Structures

		Percent of FT/FT Students Receiving Institutional Aid		Fall-to-Fall Retention Rate for All Students	
MSI Category	***N***	**M**	**(*SD*)**	**M**	**(*SD*)**
AANAPISI	12	41.3	*(22.9)*	81.1	*(7.3)*
All Other	2767	49.1	*(28.7)*	75.7	*(32.8)*
ANNHSI	8	50.9	*(29.0)*	75.3	*(5.1)*
All Other	2771	56.9	*(30.1)*	75.4	*(28.6)*
HBCU	84	51.8	*(23.5)*	62.9	*(11.8)*
All Other	2695	64.1	*(22.2)*	74.2	*(25.6)*
HSI	88	48.0	*(34.4)*	74.1	*(10.0)*
All Other	2691	60.2	*(21.4)*	72.9	*(25.7)*
NASNTI	2	66.0	*(42.4)*	72.0	*(8.5)*
All Other	2777	42.5	*(21.8)*	70.1	*(35.1)*
PBI	10	59.1	*(38.9)*	62.8	*(13.4)*
All Other	2769	64.6	*(29.5)*	73.8	*(33.6)*
TCU	16	39.5	*(32.9)*	56.4	*(26.8)*
All Other	2763	49.8	*(20.6)*	70.5	*(28.0)*

Note: "All Other" reflects the weighted average and standard deviation based on the proportion of sectors and highest degrees represented in each MSI category.

characteristics, our analysis found that the overall MSI-aligned Fall enrollment proportion at AANAPISIs averaged 23.4% (*SD* = 16.3). For both 4-year and 2-year AANAPISIs, a considerable proportion of enrollment were students with Asian identities as opposed to those identifying as Native Hawaiian or other Pacific Islander. Across all racial backgrounds included in the designation, AANAPISIs employed nearly twice as many MSI-aligned instructional staff as non-AANAPISI institutions employed. On average, AANAPISIs served a relatively small proportion of students with institutional aid. Notably, 4-year AANAPISIs had a higher average proportion of FT/FT degree- or certificate-seeking undergraduate students receiving institutional aid (*M* = 41.3, *SD* = 22.9) than did their 2-year counterparts (*M* = 7.8, *SD* = 10.4).

Fall-to-Fall retention for all students at AANAPISIs ranged from 69.3% (*SD* = 8.2) at 2-year institutions to 81.1% (*SD* = 7.3) at 4-year institutions, both of which are higher than the weighted national averages for each sector (60.3% and 75.7%, respectively) and all other MSI categories. The average MSI-aligned 150% graduation rate was 24.5% (*SD* = 16.1) for 2-year AANAPISIs and 51.5% (*SD* = 18.4) for 4-year AANAPISIs. While the MSI-aligned completion proportion at 2-year AANAPISIs (*M* = 23.5, SD =13.6) mirrored that of their graduation rates, the average MSI-aligned completion proportion at 4-year

Table 7. General 2-year Minority-Serving Institutions: Institutional Characteristics and Structures

		Percent of FT/FT Students Receiving Institutional Aid		Fall-to-Fall Retention Rate for All Students	
MSI Category	***N***	**M**	***SD***	**M**	***SD***
AANAPISI	11	7.8	*(10.4)*	69.3	*(8.2)*
All Other	1348	19.9	*(19.3)*	60.3	*(8.9)*
ANNHSI	4	34.0	*(7.4)*	59.0	*(5.7)*
All Other	1355	20.4	*(20.0)*	60.4	*(9.0)*
HBCU	12	21.3	*(12.9)*	46.8	*(17.3)*
All Other	1347	21.5	*(5.9)*	61.0	*(16.6)*
HSI	82	14.0	*(14.9)*	65.0	*(7.7)*
All Other	1277	21.1	*(20.3)*	59.9	*(8.9)*
NASNTI	4	38.5	*(16.4)*	46.8	*(4.3)*
All Other	1355	20.4	*(19.9)*	60.5	*(8.9)*
PBI	23	16.3	*(21.5)*	57.5	*(6.9)*
All Other	1336	20.6	*(19.9)*	60.5	*(9.0)*
TCU	19	46.1	*(35.2)*	53.9	*(18.0)*
All Other	1340	21.4	*(3.7)*	61.1	*(19.1)*

Note: "All Other" reflects the weighted average and standard deviation based on the proportion of sectors and highest degrees represented in each MSI category.

AANAPISIs (M = 23.5, SD = 21.0) was much lower in comparison.

Alaska Native and Native Hawaiian–Serving Institutions

ANNHSIs represented 3% (n = 12) of the MSIs funded in 2020. ANNHSIs were predominantly public colleges (n = 8) located in the states of Hawaii (n = 8) and Alaska (n = 4). Due to the different enrollment threshold requirements for Native Hawaiians (10%) and Alaska Natives (20%), the overall group demonstrated a wide range of MSI-aligned student enrollment representation at both 2-year (M = 4.8, SD = 1.5) and 4-year institutions (M = 19.8, SD = 19.9).

Similar to AANAPISIs, MSI-aligned instructional staff representation at ANNHSIs was much higher than the national average. At 2-year institutions, the representation of Native Hawaiian and other Pacific Islander instructional staff (M = 11.3, SD = 4.6) was almost twice that of undergraduate students (M = 4.8, SD = 1.5)—the only MSI category to demonstrate such a difference. While the proportion of FT/FT undergraduates receiving institutional aid at 2-year institutions (M = 34.0, SD = 7.4) was less than that of those receiving such aid at 4-year institutions (M = 50.9, SD = 29.0), it remained higher than the weighted national average (M = 20.4, SD = 20.0) and was also higher than the majority of other 2-year MSI categories.

The average Fall-to-Fall retention rate at ANNHSIs was 59.0% (*SD* = 5.7) at 2-year institutions and 75.3% (*SD* = 5.1) at 4-year institutions—both of which are comparable to the weighted national averages (i.e., 60.4% and 75.4%, respectively). MSI-aligned graduation rate outcomes at ANNHSIs varied widely, with the highest rate for Native Hawaiians at 4-year institutions (*M* = 49.3, *SD* = 30.2). The lowest average graduation rate within the ANNHSI subgroups was for Alaska Natives and Native Americans at 2-year institutions (*M* = 0.0. *SD* = 0). However, these data should be considered with caution since only two of the four 2-year colleges reported out on this outcome. All four 2-year institutions are in Hawaii, with few Alaska Native and Native American enrollments. The subgroup averages for MSI-aligned completion proportion also varied widely. The highest proportion was for Alaska Native and Native American students (*M* = 14.4, *SD* = 24.6) at 4-year institutions, however, which is an average substantially higher than the national average (*M* = 1.6, *SD* = 0.6).

Hispanic-Serving Institutions

By far, HSIs were the most prevalent MSI category (*n* = 170), representing nearly 46% of funded MSIs in 2020. Nearly 80% (*n* = 135) of HSIs were public, and a little more than half (52%) were 4-year institutions. Roughly 10% (*n* = 17) of HSIs were in Puerto Rico, creating distinct student and faculty composition differences. For example, all 17 HSIs in Puerto Rico had between 94% and 100% Hispanic Fall enrollment representation. Similarly, Hispanic faculty representation at MSIs ranged between 90% and 100%. The MSI-aligned enrollment proportion at 2-year (*M* = 48.7, *SD* = 15.4) and 4-year (*M* = 54.8, *SD* = 26.3) HSIs was the highest of the enrollment-based MSI categories. MSI-aligned instructional staff representation at 4-year institutions (*M* = 29.3, *SD* = 34.7) was nearly twice that of 2-year institutions (*M* = 15.8, *SD* = 11.7). Although the percent of students receiving institutional aid at 4-year HSIs (*M* = 48.0, *SD* = 34.4) was, on average, more than three times greater than students receiving aid at 2-year HSIs (*M* = 14.0, *SD* = 14.9), both subgroups were below the adjusted national average for their sector (60.2% and 21.1%, respectively).

Overall Fall-to-Fall retention averages at 2-year (*M* = 65.0) and 4-year (*M* = 74.1) HSIs were some of the highest across MSI categories, and were slightly higher than the national averages for each sector. MSI-aligned FT/FT graduation rates for HSIs—25.4% (*SD* = 8.2) for 2-year institutions and 41.8% (*SD* = 17.2) for 4-year institutions—were higher than other MSI categories, and slightly lower than the weighted national averages. The MSI-aligned completion proportion of 2-year (*M* = 45.8, *SD* = 16.6) and 4-year (*M* = 48.8, *SD* = 28.6) HSIs was relatively comparable, and was substantially higher than the respective national averages at 2-year (*M* = 13.1) and 4-year (*M* = 10.3) institutions.

Historically Black Colleges and Universities

HBCUs were the second-most-prevalent MSI category (*n* = 96) in the analysis, representing 26% of funded MSIs in 2020. Approximately 88% of the group were 4-year institutions, and the group was roughly split between public and private control. While the HBCU designation is not based on enrollment, 2-year (*M* = 58.4, *SD* = 26.6) and 4-year (*M* = 79.7, *SD* = 20.0) HBCUs had the second-highest MSI-aligned student enrollment across MSI categories. MSI-aligned instructional staff representation was 59.0% (*SD* = 17.0) at 4-year HBCUs and 52.9% (*SD* = 29.5) at 2-year institutions. Such representation was the highest across the

MSI categories, and was far more than the national averages in each sector. Although the proportion of students receiving institutional aid was much higher at 4-year (*M* = 51.9, *SD* = 23.5) than at 2-year (*M* = 21.3, *SD* = 12.9) HBCUs, the 2-year HBCU average was comparable to that of the weighted national 2-year institutional average (*M* = 21.5, *SD* = 5.9).

The Fall-to-Fall retention rates for both 2-year (*M* = 46.8, *SD* = 17.3) and 4-year (*M* = 62.9, *SD* = 11.8) HBCUs were less than the national sector averages (*M* = 61.0, *SD* = 16.6; and *M* = 74.2, *SD* = 25.6, respectively). Similarly, HBCUs in both sectors had average MSI-aligned graduation rates lower than the national average. Graduation rates at 2-year institutions averaged 16.2% (*SD* = 8.4), while those at 4-year institutions averaged 33.6% (*SD* = 16.3). The MSI-aligned completion proportion for 2-year HBCUs was 61.2% (*SD* = 29.8) and 80.2% (*SD* = 18.1). Notably, the average proportion of completions conferred to Black students at HBCUs is almost 10 times that of the national average (*M* = 8.6, *SD* = 3.0), which is higher than all enrollment-based MSI categories.

Native American–Serving Nontribal Institutions

NASNTIs were the smallest MSI category (*n* = 6), representing less than 2% of the funded MSI population. Four of the six institutions were 2-year institutions, and all institutions in the group were publicly controlled. Similar to AANAPISIs, the average MSI-aligned enrollment proportion at NASNTIs was higher at 2-year institutions (*M* = 20.0, *SD* = 10.9) than at 4-year institutions (*M* = 9.0, *SD* = 2.8). MSI-aligned instructional staff representation at 2-year NASNTIs was 8.0% (*SD* = 4.8) and at 4-year institutions was 1.0% (*SD* = 1.4). Instructional staff representation was low among the MSI categories but higher than the national averages. The average proportion of students receiving institutional aid at 2-year (*M* = 38.5, *SD* = 16.4) and 4-year (*M* = 66.0, *SD* = 42.4) NASNTIs was higher than the proportion receiving aid at all MSI categories and the national averages.

The average Fall-to-Fall retention rate at 2-year NASNTIs was 46.8% (*SD* = 4.3), which is a full 25 percentage points less than the 4-year institutional average (*M* = 72.0, *SD* = 8.5). The average MSI-aligned graduation rates were more comparable between 2-year (*M* = 24.0, *SD* = 12.4) and 4-year (*M* = 28.0, *SD* = 28.3) NASNTIs. Similar to other MSIs with enrollment requirements between 10% and 20% (see Table 1), the MSI-aligned completion proportion at 2-year (*M* = 19.8, *SD* = 6.3) and 4-year (*M* = 8.9, *SD* = 3.4) NASNTIs was lower in comparison to other MSI categories, but was much higher than the weighted national averages.

Predominantly Black Institutions

PBIs represented nearly 9% (*n* = 33) of funded MSIs in 2020. Two-thirds of PBIs were 2-year institutions, and most institutions in the group were publicly controlled (about 88%). PBIs have one of the highest enrollment requirements (i.e., their enrollment must be at least 40% African American students) of the enrollment-based MSIs, with relatively high MSI-aligned enrollment at 2-year (*M* = 48.3, *SD* = 11.0) and 4-year PBIs (*M* = 49.3, *SD* = 13.5). The average MSI-aligned instructional staff representation at PBIs was among the highest across MSI categories, with 25.4% (*SD* = 14.2) at 2-year institutions and 24.7% (*SD* = 14.2) at 4-year institutions. The average proportion of students receiving institutional aid at 2-year institutions was 16.3% (*SD* = 21.5) and 59.1% (*SD* = 38.9) at 4-year PBIs. The 42 percentage-point

difference between the sectors was the largest across MSI categories.

The average Fall-to-Fall retention rates for 2-year (*M* = 57.5, *SD* = 6.9) and 4-year (*M* = 62.8, *SD* = 13.4) PBIs were lower than the adjusted national averages in each sector. Similar to the majority of MSI categories, the MSI-aligned graduation rate at 4-year institutions (*M* = 31.8, *SD* = 11.4) was higher than that of 2-year institutions (*M* = 17.9, *SD* = 12.2) but lower than that of the weighted national averages. Despite the difference in graduation rates, the MSI-aligned completion proportion at 2-year (*M* = 45.5, *SD* = 11.2) and 4-year (*M* = 45.3, *SD* = 16.0) PBIs was notably similar, and both were higher than the adjusted national averages.

Tribal Colleges and Universities

TCUs was the third most prevalent category of funded MSIs (*n* = 35) in 2020. TCUs in 2020 were a balance of 2-year (*n* = 18) and 4-year (*n* = 16) institutions, all of them predominantly controlled by the public. In addition to having the highest average MSI-aligned enrollment across 2-year (*M* = 81.7, *SD* = 19.9) and 4-year MSI institutions (*M* = 85.6, *SD* = 13.5), TCUs demonstrated MSI-aligned enrollments far greater than the adjusted national averages (i.e., *M* = 1.2 for 2-year institutions and *M* = 0.8 for 4-year institutions). Average representation from MSI-aligned instructional staff followed a similar trend. At 2-year TCUs, the average MSI-aligned instructional staff proportion was 42.6% (*SD* = 26.2) and 41.9% (*SD* = 17.7) at 4-year institutions. Comparatively, the weighted national average for MSI-aligned instructional staff representation at 2-year institutions was 0.6% (*SD* = 0.2) and 0.5% (*SD* = 0.2) at 4-year institutions. The average proportion of students receiving institutional aid at TCUs was also distinct in that it was the only MSI category in which 2-year institutions (*M* = 46.1, *SD* = 35.2) had a higher average than 4-year institutions (*M* = 39.5, *SD* = 32.9).

The average Fall-to-Fall retention rate for 2-year TCUs was 53.9% (*SD* = 18.0) and 56.4% (*SD* = 26.8) for 4-year institutions. Both sector averages were lower than the weighted national average, but the average for 4-year TCUs was lower than any other MSI category. Average MSI-aligned graduation rates were also low for TCUs compared to the weighted national rates and other MSI categories. The average 6-year graduation rate at 2-year TCUs was 13.3% (*SD* = 12.0), while that rate at 4-year TCUs was 18.4% (*SD* = 16.3). In contrast, the average MSI-aligned completion proportion for 2-year (*M* = 82.4, *SD* = 20.1) and 4-year (*M* = 86.7, *SD* = 13.6) TCUs was higher than any other MSI category, while being magnitudes more than the weighted national averages.

DISCUSSION AND IMPLICATIONS

This study used descriptive analyses of IPEDS data to explore the extent to which MSIs served their target population. We found that MSIs enrolled higher percentages of MSI-aligned students and employed more-significant percentages of MSI-aligned instructional staff. Most MSIs generally retained higher percentages of MSI-aligned students. In addition, most MSIs showed higher completion proportions, though nearly all MSI categories saw lower graduation rates among MSI-aligned students. The average proportions of FT/FT students receiving institutional aid were higher at some MSIs, while being lower at other MSIs. While the findings provide evidence that MSIs overall embody a spirit of servingness, it was noticeable that history, structure,

and mission matter. Given these conclusions, two themes arose that are important to discuss:

1| Enrollment alone is not a proxy for servingness. And

2| MSIs are not monolithic in how they serve or their ability to serve students.

García et al. (2019) argue that servingness is a multidimensional and conceptual way to understand what it means for HSIs to move from simply *enrolling* Hispanic students to actually *serving* them. The findings from this study support García et al.'s conceptual framing, and we extend it to other MSI categories. Surely, enrollment of a target racial population is a critical factor in defining and categorizing MSIs. However, enrollment as a sole factor can be misleading because the enrollment thresholds vary among MSI categories, especially if we are using the thresholds identified by ED. For example, the 40% enrollment threshold for PBIs is the highest among MSIs. Likewise, the results for ANNHSIs were very dependent on the differences between the threshold requirements for Native Hawaiians and Native Alaskans (10% and 20%, respectively).

Furthermore, location interestingly appeared in the results as a covariate in future research. A further examination of the results showed that the 94% to 100% enrollment of Hispanic students at HSIs could be influenced by the 10% of HSIs (n = 17) located in Puerto Rico. This finding suggests that location in U.S. territories (e.g., Guam, American Samoa) and the Freely Associated States (e.g., Republic of Palau), along with the historical background of U.S. colonization of these lands, might be an important factor to examine in future analyses.

Previous literature suggests that the variance in the instructional staff and institutional aid factors is likely driven by the institution's overall mission and the prioritization of inclusive practices. For example, HBCUs and TCUs were founded to educate Black and Indigenous students; that remains their mission, regardless if their student population has diversified over time. HBCUs and TCUs had the highest average percentage of MSI-aligned instructional staff. We also observed a pattern between the timeframe of establishing an MSI category and some of the findings: most MSIs that were designated earlier had averages of MSI-aligned instructional that were generally higher than averages in later-designated MSIs. For example, the averages at HBCUs, HSIs, PBIs, and TCUs were higher than all other MSIs in comparison. Still, the instructional staff at most MSIs is still predominantly white, a finding that supports previous scholarship that observed many MSIs possess predominantly white faculty, staff, and administrators (Contreras, 2017; Raines, 1998). Such findings imply that, as institutions grow their student body to meet threshold requirements, they must be equally mindful—intentionally or unintentionally—of diversifying and retaining their faculty (Raines, 1998; Turner et al., 2008).

We also found that the proportion of MSI-aligned students receiving institutional aid varied widely. At some MSIs, such as AANAPISIs, HSIs, and 4-year TCUs, the proportion of MSI-aligned students receiving institutional aid was lower than national weighted averages. The proportion was higher than the national weighted averages at other MSIs, such as ANNHSIs, HBCUs, NASNTIs, PBIs, and 2-year TCUs. Examining the factors contributing to these variations was beyond the scope of this study. Some existing scholarship suggests no disparate impact of performance-based funding policies on

2-year MSIs (e.g., Hu, 2019; Li et al., 2018), however, while other scholarship negatively impacted 4-year MSIs (Ortagus et al., 2022). Still, scholars have repeatedly discussed the financial precarity MSIs face (e.g., Aguilar-Smith, 2021; Museus et al., 2021; Vargas et al., 2019). Future studies should examine institutional factors—such as federal and state-level funding, institutional endowments, and state funding policies—that may contribute to these variations.

We were also curious how IPEDS data could be used to learn more about the servingness of MSIs. IPEDS data that were meaningful to our examination of MSIs were fragmented and not always available. For example, we could not find or derive meaningful equivalents of the variables suggested by García and colleagues (2019) in their framework of servingness, such as culturally relevant curricula or student support services. As such, we were limited in our ability to utilize their framework fully.

Furthermore, the analysis was complicated by the NCES's exclusion of variables for MSI status, other than HBCUs and TCUs, and inconsistent racial and ethnic identity disaggregation with identities included in the federal definitions (e.g., AANAPISIs use "Native American Pacific Islander" but IPEDS collects only "Native Hawaiian and other Pacific Islander" as a racial category). Garcia and Mayorga (2017) argue that analyzing racial data can be challenging when using secondary data; our study also found this to be true.

Additional research would be beneficial to advance the understanding of servingness at MSIs. Future research might consider using a different data set with the same or similar variables. For example, a future comparative and correlational study design should explore the statistical differences and significant relationships between the selected variables in this study and student outcomes. Researchers could also conduct a longitudinal study to learn more about how the racial population of institutions, MSI-designated institutions, and servingness change over time.

Our findings have several implications for practice. First, while we understand that institutional status as an MSI may change over time, the NCES can create additional MSI variables in IPEDS and across other data systems to alleviate the capacity burdens for researchers. The current existence of an "HBCU" and a "TCU" variable alleviates some of these burdens; however, such a variable for other MSI categories or even a comprehensive MSI variable does not exist. Such variables can also support practitioners at MSIs who seek to apply for federal funding competitions.

Furthermore, IPEDS can expand its racial and ethnic categories, particularly for the Asian American, other Pacific Islander, Alaska Native, and Native Hawaiian communities, to better reflect these communities and to increase the ease of data use (Lee et al., 2017; Nguyen, 2020). Practitioners, including those from community-based organizations, often turn to other sources to make data-informed decisions or to collect their data because of limitations in federal data systems (AAPI Data, 2022; Byon, 2020; Nguyen et al., 2013). Because our team drew on publicly available government agency data (e.g., from ED and IPEDS), we urge these agencies to work together to alleviate research burdens for scholars and practitioners.

CONCLUDING THOUGHTS

When we embarked on this journey, we explored the possibility of conducting a meaningful study with secondary data related to MSIs, which collectively

enroll and serve large numbers of students of color, especially students from low-income backgrounds. These institutions embody profound differences across institutional characteristics, yet, as demonstrated in this descriptive analysis, these institutions are still graduating significant numbers of students of color.

Simply put, these institutions are important to the fabric of higher education with regard to advancing educational equity and contributing to society. As we proceeded, we found the complexities of race, racism, and processes of racialization, as well as colonization, to be important considerations. However, these elements are missing in IPEDS data and are reflected in how the data are collected. We made a few concrete recommendations and supported recommendations made by other scholars, practitioners, and leaders. We call on government agencies, educational institutions, and other organizations to support research on these important institutions by attending to race complexities, alleviating research barriers, and increasing researcher capacity. Conducting and using research about these institutions should be and can be made easier.

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