Article

The Higher Education Act and Minority Serving Institutions: Towards a Typology of Title III and V Funded Programs

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Abstract: To date, there has been little analysis of MSI Title III and V grant-funded programs across all MSI categories. For researchers, practitioners, and policymakers, it is imperative to explore the contributions of MSIs as manifested in Title III and V grant-funded programs. The purpose of this study is to analyze MSI Title III and V programs based on project abstracts. This study is driven by three research questions: How have MSIs used their Title III and V grants? What are the expressed outcomes of MSI grant funding? Using restricted-use data obtained from the U.S. Department of Education, NCES IPEDS, and the Office of Postsecondary Education, this study uses a quantitative content analysis strategy to respond to the research questions in ways that can help stakeholders begin to understand the impact of the federal grant on MSIs.

Keywords: minority serving institutions; Higher Education Act; policy; student success

1. Introduction

The shifting demographics of the United States are changing the shape of higher education to come. As of 2011, more people of color were born in the U.S. than Whites. The White population is projected to become a minority by 2050. The demographic changes have already led to friction, particularly at the levels of state and federal politics. These changes are both racial and generational in nature. White is not the future of the U.S. Births of Hispanics and Asians already outpace Whites. Yet the political reality has not caught up with the demographic reality. There is a palpable cultural generational gap between policymakers and the residents of an increasing number of U.S. states. Though the tension is often criticized as the manifestation of festering racist attitudes, Frey argues, "It reflects the social distance between minority youth and an older population that does not feel a personal connection with young adults and children who are not 'their' children and grandchildren" [1] (p. 7). The growing populations of color throughout the U.S. portend in increase in the number of minority serving institutions (MSIs).

MSIs accounted for approximately 10% of postsecondary institutions in the United States and enrolled 26% of all college students in 2013–2014 (about 3.8 million students) [2,3]. MSIs served 40% of underrepresented students totaling approximately 3.8 million students in the same academic year [3]. An institution can be designed as an MSI if a percentage of the student population exceeds a particular number (usually 25%) and is then eligible for federal funding. Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs)—the original MSIs—educated students of color who were forbidden an education in the traditional colleges and universities of the day. MSIs continue to provide an education to all students regardless of race and ethnicity.

Since an institution can become an MSI after meeting two benchmarks (the percentage of enrollment that is Latino or AAPI and the percentage that receives Pell Grants), it is certain that the number of MSIs will rise given the increase in Hispanic and AAPI populations in the state. Table 1

displays the eligibility criteria and legislation for the MSI categories included in this study. I focus on Alaska Native and Hawaiian Native Serving Institutions (ANNH), Asian American and Native American Pacific Islander Serving Institutions (AANAPISIs), Hispanic Serving Institutions (HSIs), Native American Serving Non-Tribal Institutions (NASNTIs), and Primarily Black Institutions (PBIs) in my study. I exclude Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs), as these were founded specifically as MSIs and do not submit project abstracts to receive Title III or Title V grant funding.

Table 1. Title III and Title V Legislation and Eligibility.

MSI Designation	Department of Education Legislation	Eligibility (Racial)	Eligibility (Income)
Alaska Native Native Hawaiian Serving Institutions	§317(b) of the HEA, 20 U.S.C. §1059d(b)	20% Alaska Native students/10% Native Hawaiian students	
Asian American Native American Pacific Islander Serving Institutions	§§ 320(b) and 371(c)(2) of the HEA, 20 U.S.C. §§1059g(b) and 1067q(c)(2)	10% Asian American and Native American Pacific Islander students	50% low income
Historically Black Colleges & Universities	Part B of the HEA, 20 U.S. Code § 1067q		
Hispanic Serving Institutions	§502 of the HEA, 20 U.S.C. §1101a	25% Hispanic students	50% low income
Native American Non-Tribal Serving Institutions	§§319(b) and 371(c)(8) of the HEA; 20 U.S.C. §§ 1059f(b) and 1067q(c)(8)	10% Native American students	
Predominantly Black Institutions	§§318(b) and 371(c)(9) of the HEA; 20 U.S.C. §§ 1059e(b) and 1067q(c)(9)	40% Black students	50% low income
Tribal Colleges & Universities	§316 of the HEA, 20 U.S.C. §1059c		
Predominantly Black Institutions	§§318(b) and 371(c)(9) of the HEA; 20 U.S.C. §§ 1059e(b) and 1067q(c)(9)	40% Black students	50% low income

Source: U.S. Department of Education, Office of Postsecondary Education.

The federal government formally recognized MSIs with the Higher Education Act of 1965. Under Title III, HBCUs began receiving federal funding [2,4]. TCUs were appropriated funding by the federal government beginning in 1994 [5]. HBCUs and TCUs were founded specifically to educate African American and Native American student populations respectively. Additional classifications of postsecondary institutions as MSIs developed to address the increasing presence of students of color and low-income students in many colleges and universities throughout the U.S. Eligibility criteria for such federal funding occurred first for HSIs in 1998. Other categories followed with the passage of the College Cost Reduction and Access Act in 2007 [6].

MSIs receive federal funding through Titles III and V of the Higher Education Act. These include mandatory and discretionary components, with grants for all MSI categories besides HBCUs and TCUs being competitive. Many categories of MSIs can also apply for cooperative grants between multiple institutions, though the lead institution must be designated as an MSI. There are numerous functions that can be funded through MSI grants. A common use of MSI federal funding is academic support. Another use of MSI funding is the purchase of scientific equipment or improving classrooms and libraries. Another popular utilization of federal funding is for instruction and curriculum development [6]. The federal government appropriated roughly $762 million to MSIs [7]. The overall

purpose of MSI funding is for these institutions to invest in the advancement of student success. As there is currently no common definition of student success, institutions continue to devote this resource to a variety of projects. The goals of such projects could include an increase in student persistence or completion of a degree. Other programs may encourage students to advance from remedial education into college-level coursework.

Institutions submit project abstracts to the Office of Postsecondary Education. There is a two-step process for institutions to received federal funding as an MSI. First, an institution must apply to be considered eligible to apply for a federal MSI grant. Once granted permission, the institution then applies for a grant. The project abstract is part of that process. The project abstract outlines what an institution intends to do with the grant and in most cases, the desired results. Project abstracts often include information required for eligibility: total enrollment, number of Pell recipients, number of part-time students, and total core expenses [8]. Though not required, project abstracts can include specific numeric targets for intended outcomes of the MSI program.

To date, there has been little analysis of MSI Title III and V grant-funded programs across all MSI categories. For researchers, practitioners, and policymakers, it is imperative to explore the contributions of MSIs as manifested in Title III and V grant-funded programs. The purpose of this study is to analyze MSI Title III and V programs based on project abstracts. This study is driven by three research questions: How have MSIs used their Title III and V grants? What are the expressed outcomes of MSI grant funding? How has the distribution of federal funding for Title III and V changed over time? The responses to these questions can help stakeholders begin to understand the impact of the federal grant on MSIs.

2. Literature Review

2.1. Traditional Measures of Student Success

Despite an emphasis on completion for over a decade, completion rates remain static [9–12]. This applies to most of higher education, though some students are less likely to obtain a college credential [13]. Gaps in completion based on racial and ethnic student populations have been well documented. A substantial portion of the extant research on college completion examines selective institutions [11]. Less focus has been placed on completion in nonselective four and two-year institutions. These are precisely those institutions that disproportionately enroll minority students. Recent work has begun to evaluate completion in MSIs, though the bulk of such research tends towards qualitative and descriptive lenses. The research also tends to focus on specific MSI categories (HBCU, HSI, or AANAPISI) and not a combination of these types [14–19]. MSI completion research has increasingly emphasized the role of STEM education and completion [20–22].

Given the exponential increase in MSIs and the number of students attending them, assessments of MSI completion are essential. Numerous studies have revealed the strengths of MSIs in advancing student success. HSIs account for 12.9% of non-profit colleges and universities yet enroll 21.9% of all students and 60.8% of all Hispanic students [23]. Researchers have also documented some of the attainment gains of the various MSIs. Of the top 20 institutions that award science and engineering degrees to Asians or Pacific Islanders, seven identify as AANAPISIs [2]. Ten HBCUs are among the top 20 institutions that award science and engineering degrees to Blacks [2]. HBCUs enrolled 8% and graduated 18% of all Black students in U.S. higher education [24]. More than a third of black STEM PhD holders earned their undergraduate degrees at HBCUs [25]. Finally, 10 HSIs are among the top 20 institutions that award science and engineering degrees to Latinos [2].

Additionally, Flores and Park employed advanced quantitative methods to determine if there was a difference in completion measures between students enrolled in four-year MSIs in Texas compared to students attending four-year non-MSIs in Texas [15]. They specifically looked at six-year baccalaureate degree completion for Hispanic and Black students. They found that there was no statistically

significant difference after controlling for institutional selectivity between graduation rates between MSIs and non-MSIs using propensity score matching.

2.2. Culturally Relevant Pedagogy

Much of the research on MSIs gives primacy to their strengths in fostering student success. Researchers indicate that MSIs historically enroll, retain, and graduate a larger number of students of color due to an increased focus on the cultural background of those students [18,26,27]. Unlike the experience for students of color in non-MSIs, MSIs are more likely to better cater to those students with more limited academic preparation. MSIs have also been shown to excel at serving students when they as an institution embrace an organizational culture that reflects the community and background of their target student population [26]. As research and project abstracts for MSI programs reveal, many MSIs emphasize the importance of the culture and community of their students [28,29]. In comparison to larger institutions and non-MSIs in general, research has demonstrated that MSIs place a higher premium on student advising and academic support services [30]. The confluence of support services, community, and a more inclusive scholastic environment elevates students in a way that non-MSIs would not [26].

A rising concern in MSI research literature is determining if a federally designated MSI embraces its identity as an MSI. This research is beginning to connect the degree to which an institution works to serve its students of color or merely enrolls them [31]. Proponents of MSIs argue that such institutions more successfully educate and graduate students when it provides support programs aimed at its target student population (depending on what MSI classification it has received) [31,32]. There continues to be much debate about how institutions can best and most fully advance themselves as an MSI. This is truer for non-HBCU and non-TCU MSIs as these institutions for the most part were not founded to serve students as an MSI (though the issues surrounding identity also play out in HBCUs and TCUs to a lesser extent).

Research on MSIs reveals the impact of federally funded grant programs that target specific student of color populations. The majority of these studies is qualitative and explores the benefits to students of culturally driven pedagogies, support services, and course work [26,27,30,33,34]. Culturally relevant pedagogies emphasize the cultural empowerment of a student's background and community. By its nature, such an approach is infused with an adherence to social justice inequities [34,35]. They also have been shown to strengthen student learning and boost student outcomes [36,37] Often these modes of learning include innovative approaches to instruction, such as flipped classrooms and incorporating the students' lived environments [38,39].

2.3. Beyond Completion as an Outcome Measure

Though an increasing body of literature explores the relationship between institution attended and workforce earnings among students of color, fewer studies have investigated how these factors play out in MSIs. Some researchers have assessed race and economic outcomes in flagship institutions [40,41]. Others have compared institutional selectivity to graduate workforce earnings [42–46].

Research on the return on investment (ROI) of higher education has increased, particularly given policymaker and intermediary organization demands for such information. While research focusing exclusively on MSI ROI remains scant, it is growing. Much of this research is distinct from attainment or completion research in that the outcome variable of interest is workforce earnings instead of credential completion. Several recent studies commissioned by the Center for Minority Serving Institutions explored the ROI of the more common MSI categories. These include assessments of AANAPISIs, HBCUs, HSIs, and TCUs.

In their paper assessing the impact of a federally funded learning community program at an AANAPISI community college, Teranishi et al. demonstrate that the program substantially boosted degree attainment, increased transfer to four-year institutions, and lessened students' time to advance from developmental to college-level classes [38].

Park, Flores, and Ryan, and Strayhorn tackle the topic of workforce ROI in MSIs [16,19]. Park, Flores, and Ryan found that Latino graduates of HSIs have earnings comparable to Latinos from non-HSIs, after controlling for institutional selectivity [16]. Strayhorn demonstrated that HBCU graduates show positive returns on investment in occupational status and Black identity after controlling for institutional selectivity [19]. This follows an earlier study wherein HBCU Black graduates were found to be at a slight disadvantage in workforce earnings when compared to Black graduates of non-HBCUs [18]. For the most part, these studies dispel the common criticism of MSIs as doing a disservice to their students by corralling them into institutions suffering from low completion rates and ill-equipping them for the labor market [6].

Such research demonstrates the potential for routine evaluations of federal grant-funded programs to reveal whether MSIs outperform non-MSIs in graduating students of color. Teranishi et al. provides a framework for conducting such rigorous assessment [38]. Program evaluation offers MSIs a critical opportunity to rigorously document successful program characteristics. While program evaluations signal the strengths of MSIs to policymakers, they also measure the efficacy of MSI programs in supporting their students.

2.4. Core Revenues and Financial Support

Most MSIs face institutional finance challenges [7,47,48]. This in part was the justification for these institutions receiving additional funding via Title III and Title V grants. Another critical finance consideration is that MSIs enroll a substantial percentage of low-income students. As research has shown, students from lower socioeconomic backgrounds arrive on college campuses less academically prepared than their peers from higher-income families. Such students tend to require additional academic support, which requires additional financial resources.

Limited core revenues in MSIs is affected by the overall decline in state funding throughout the U.S. State funding continues to comprise the largest share of core revenues in public MSIs [47]. Yet this share has been shrinking [49–52]. Most public four-year colleges and universities respond to the overall decrease in state appropriations by increasing tuition levels, targeting out of state students, and narrowing academic enrollment criteria. The well-documented result is a rising sense that higher education is becoming unaffordable to a large portion of U.S. citizens [53]. Tuition at public four-year schools was more than twice the amount in 2012 compared to 1987 ($5189 and $2588 respectively) [54].

Many researchers have found that MSIs tend to receive less state and federal support compared to non-MSIs. Per FTE funding patterns indicate a considerable chasm. In the 2013–2014 academic year, per FTE core revenues were approximately $17,000 in MSIs compared to nearly $30,000 in non-MSIs [55]. HSIs received an average of approximately $3500 per FTE compared to over $5000 at non-MSIs in state appropriations [56]. A recent Hispanic Association of Colleges and Universities (HACU) report found that HSIs received 69 cents for each dollar that was distributed to all other higher education institutions from federal funding [23].

HBCUs have been especially affected by state funding changes given historical inequitable funding patterns. Several studies documented a history of inequitable state funding to HBCUs [47,48,57–60]. The legacy of legislative wrangling reveals how such funding patterns were fought in court beginning in the late 19th century. Important cases include *Plessy v. Ferguson* (1896), *Brown v. Board of Education* (1954), and *Knight v. State of Alabama* (2006). Findings from recent research includes a 12.5 percent difference in state funding between public HBCUs and public non-HBCUs [60]. Southern states including Alabama, Louisiana, Mississippi, and North Carolina were shown to appropriate less funding to their public HBCUs compared to peer public non-HBCUs [47,48].

3. Theoretical Framework

As this study uses the institution as the unit of analysis, it is necessary to seek out the insights of theoretical perspectives that illuminate the processes, preferences, and motivations from an organizational as opposed to student-centered or individual vantage point. It is also requisite to

acknowledge the heterogeneity of MSIs. Previous studies on MSIs tended to focus exclusively on one MSI category. Such studies tended to treat the sole category as a monolithic entity. Yet exploring different types of MSIs demands attention to the great variation that exists, even with one classification. Sensitivity to institutional diversity is key to analyzing and understanding how MSIs develop and pursue individual institutional objectives.

This study relies on two theoretical approaches to inform its methodology and analysis. First, resource dependence theory has been used to explain how and why an institution chooses to seek financial remuneration to achieve a desired end. Boland and Nuñez, Crisp, and Elizondo incorporated resource dependence theory to develop a finer grained analysis of MSI reaction to diminished funding in a state and federal environment [61,62]. When applying resource dependence theory to public higher education, it is essential to understand the governance and public funding context in which postsecondary institutions exist. According to resource dependence theory, institutions must seek out exogenous support to continue to function as a living entity [63,64]. Colleges and universities rely on multiple revenue streams. For public postsecondary institutions, state appropriations comprised the largest share of core revenues. While the portion of state funding to public institutions shrunk in the past three decades, it still comprises their largest revenue source. This reliance on external forces makes colleges and universities vulnerable to the vicissitudes of the economy [65]. In the face of uncertainty and economic scarcity, institutions such as MSIs that are already financially constrained must be constantly seeking new sources of revenue [64]. The federal grant for MSI programming thus becomes an important revenue outlet, as other forms of funding decrease. Research on MSI federal funding as a component of core revenues does not yet exist. Yet as this study will show, such funding is small, yet growing.

Another theoretical perspective helpful for analyzing MSI federally funded programs is new institutionalism. Variants of new institutionalism have been incorporated to studies of organizations to investigate institutional behavior as shaped by interactions with or the behavior of other institutions. According to Shepsle, new institutionalism can be deployed to describe the qualities of social or political phenomena as the consequence of organizational preferences as well as organizational characteristics and behaviors [66]. New institutional is often characterized as less a concrete theory and more of an approach to an analysis of social behavior. Many studies of politics and policy are grounded in what new institutionalism is seen as an outgrowth of, including rational choice theories [67].

New institutionalism can be employed as a conceptual lens to refract the contours of institutional impact on individual decision-making as the consequence of the influence of other institutions and societal factors. MSIs do not exist in institutional or policy vacuums. As evidenced by the passage of legislation via Title III and Title V, MSI categories came about due to the precedent set by prior policy action to benefit students of color in an institutional setting. It took nearly two decades for activists and advocates to take inspiration from the federal recognition of HBCUs in 1965 to TCUs in 1978 to lead to the implementation of HSIs first under Title III in 1998 and then Title V in 2008. The same through-line applies to the other classifications of MSIs that followed in 2008. New institutionalism helps to explain how MSIs learn and adopt behaviors from other MSIs as well as other institutions of postsecondary education. It also clarifies why an institution would pursue federal funding to increase student outcomes. As detailed below, MSI federally funded programs can pertain to a target student population (such as Latino/a students in an HSI). They can also have a positive impact on all students enrolled regardless of race or ethnicity.

4. Methods

To answer this study's primary research questions, I rely on quantitative content analysis and descriptive statistics. Quantitative content analysis methods represent a systematic approach to analyzing text data to construct an assemblage of reoccurring themes and categories [68]. This form of content analysis is rooted in qualitative content analysis. Quantitative content analysis is a deductive analytical approach intended to test hypotheses or explore questions arising from theories or existing

research based on text or otherwise message-based information [69]. At its core, quantitative content analysis emphasizes the categorization of sections of a piece of text through the utilization of a systematic coding scheme to generate conclusions about the content or meaning of a text. In practice, content analysis relies on classification rules to assign coding units to specific categories [69,70].

Researchers have employed content analysis to answer a broad spectrum of social science research questions in fields such as political science, media and culture studies, and gender studies. Similar to qualitative content analysis, quantitative content analysis relies on a coding strategy to confirm the reliability of the research design and the validity of the study results.

This study follows the conceptual steps of a traditional of content analysis research design. It began with the development of research questions, identification of a sample and data sources, the creation of a coding scheme, data analysis and coding, reliability testing, and then distilling analysis into findings. Each stage of the research design was informed by the study's theoretical framework.

Data analysis and coding proceeded in four stages. The first was inductive, beginning with terminology common in research on MSIs, college completion, and student success. These were then searched for throughout project abstracts using in NVivo software. These were saved in software nodes and included in a codebook. The second stage of analysis was deductive in nature. In this stage, I employed NVivo to analyze MSI project abstracts to develop coding units (reoccurring terms and phrases) that indicate an institution's preferences and priorities for the implementation and outcomes of an MSI program.

In the third stage of data analysis, I selected the most recent available project abstracts based on year for each MSI category (n = 150). I analyzed these project abstracts that included the most common words and phrases using NVivo's color-coding system. The first round of searches yielded 116 words and phrases. After scanning all the abstracts, I arrived at 22 terms. I included these in the research design's codebook and then merged these categories with a unique MSI longitudinal dataset in Stata 14 consisting of enrollment, finance, and outcome variables.

The final stage of analysis involved grouping the terms and phrases into two primary conceptual buckets: project mechanisms and project outcomes. I argue that the project abstract represents the ethos of an institution, at least in terms of their MSI program. Project mechanisms refer to the mode by which an institution suggests it will implement a program (Table 2). This includes tutoring, mentoring, advising, creating a center, or precollege outreach. Project outcomes include the measures a school hopes to achieve (Table 2). Common goals include increasing retention or persistence, boosting the graduation rate or degree or certificate completion, and more generally improving student success. The Department of Education does not provide publicly available data on how many institutions apply for federal MSI grants and do not receive them. Thus, it is not currently possible to determine if specific institutions are more successful in applying for and receiving such grants compared to other institutions.

Table 2. Project Outcomes and Project Mechanisms.

Project Outcomes	Project Mechanisms
Retetion/Persistence	Center
Graduation/Completion/Attainment	Tutoring
Course Completion	Advising/Counseling
Student Success	Career Coaching
STEM	Tech/Data
Teacher Education	Precollege
Health Care	Academic Support
Transfer	Mentoring
Enrollment	Online Ed/Distance Ed
Non-Cognitive Ability	Professional Development
Community/Culture	Developmental/Remedial Courses

I define MSIs according to the Department of Education classification of an institution that is accredited, awards degrees and enrolls a specific full-time equivalent undergraduate student percentage that meets department criteria. I also include only those institutions receiving a federal grant (Title III and Title V) for specific MSI programming. Not included are emerging MSIs (those institutions near to reaching the enrollment percentage but are not yet eligible to apply to federal grant funding). It is important to differentiate between postsecondary institutions founded to serve a specific student population compared institutions that became MSIs due to a changing enrollment profile. Thus, this study includes MSIs that are required to submit project abstracts for competitive grants. HBCUs and TCUs are not included. Under Title III Part 4, institutions can apply for funding as part of the HSI STEM Articulation Program [7]. These project abstracts have been excluded due to the specificity of the program outcome (STEM achievement).

To better ensure the validity of the research design and results, I constructed a unique institution-level panel dataset including all MSIs for the years 2008 to 2015 including 707 observations. Data originated with the Penn Center for MSIs MSI database, the National Center for Education Statistics' (NCES) Integrated Postsecondary Education Data System (IPEDS), and the U.S. Department of Education Office of Postsecondary Education. Additional restricted-use data on project abstracts and per institution award amounts came from an FOIA submitted to the U.S. Department of Education. My selection of variables for analysis in this study was informed by Jaquette and Parra's suggestions for correcting potential misuses of IPEDS data given parent-child relationships and mismatches between academic and fiscal years, depending on particular IPEDS surveys [71]. Variable selection includes enrollment by race and ethnicity, finance categories, and completion. I created a dichotomous variable for project outcomes and project mechanisms. Each was coded as '1' or '0'. I also created categorical variables to indicate different classifications of MSIs.

To answer this study's second research question on the distribution of federal funding over time, a separate layer of data analysis focused on the MSI dataset to explore federal funding data. To evaluate MSI federal funding, descriptive statistics were collected from publicly available Office of Postsecondary Education (OPE) data on Title III and Title V appropriations and analyzes using Stata 14 statistical software. Per institution award data is also publicly available from OPE, but not for all MSI categories in all years.

5. Limitations

There are several limitations associated with this study. First, while efforts have been made to ensure the reliability and validity of the research design and results, content analysis by its nature is an abstract method of data analysis. The use of statistical techniques should provide more rigor to the study. Yet multiple reviewers of project abstracts would likely generate slightly different collections of terms and phrases to form the code book. Second, assigning numeric values to such terms and phrases involves some level of subjectivity. Combining NVivo for a qualitative data review and Stata for a quantitative analysis should ward off bias and provide confidence in this study's results. Still, the creation of conceptual categorization to divide the codes is solely the work of the author of this study with grounding in the literature and the study's theoretical framework. Third, HSIs comprise a disproportionate number of all project abstracts. While sophisticated statistical controls such as weighting could have been employed to account for the disparity in the number of project abstracts per MSI category, the sample selected for this study is representative of the years when all or most MSI categories applied for MSI funding.

6. Findings

Abstracts vary in how much detail institutions include in the descriptions of their mechanisms and outcomes. The majority of abstracts across all MSI categories do not include specific data point targets. There are a handful of exceptions. Evergreen Valley College—an AANAPISI two-year institution in San Jose, CA—proposed its Southeast Asian American Student Excellence (SEAASE) program

to advance participation and completion among Vietnamese and other Asian American and Pacific Islander students. It lists among several detailed goals:

- Enroll 1500 new Southeast Asian American (SEAA) students per year
- Boost the retention rate from 62.9 percent to 75 percent
- Increase completion with the goal of 70 percent of SEAA students earning 40 credits, a certificate, or transferring to a four-year institution within two years of beginning the program

6.1. Project Outcomes

Since the number of HSIs in the most recent project abstract years far outnumbered other MSI categories, the proportion of each variable was calculated per the number of abstract per MSI category. For example, there were 7 AANAPISI project abstracts in FY 2015. 5 project abstracts stipulated that retention/persistence was a goal of the MSI program. Thus, 56% of AANAPISI MSI programs in that year intended to pursue retention/persistence (Table 3). Retention and persistence are used interchangeably and at times separately throughout the abstracts. Retention/persistence was among the most commonly sought outcomes for all categories of MSIs (65%). It was much higher in ANNHs and PBIs with 92% of each category. In FY 2015, there were 96 HSI project abstracts. Of this amount, 57% of all institutions proclaimed a goal of increasing retention/persistence. Bloomfield College, a four-year public PBI in Bloomfield, NJ, proposed an extensive suite of programs to increase its retention rate of African American students. Provisions included program to focus on physical and mental health issues, increasing education for those interested in healthcare professions, the creation of a Nursing Education Lab, and improving evidence-based decision-making.

Another popular outcome was graduation rate/completion/degree attainment, with 72% of all project abstracts suggesting it as a programmatic goal. As in the case of retention/persistence, institutions do not precisely define these terms. Completion is often defined as the number of full-time, first-time students obtaining a certificate or degree in a specified timeframe, with 150% being a common metric (3 years for two-year institutions and 6 years in four-year institutions). ANNHs, AANAPISIs, and PBIs measured the highest number of abstracts including a certificate or degree completion outcome (100% of ANNHs and 89% AANAPISIs and PBIs).

Dodge City Community College in Dodge City, KS, a two-year HSI, represents a comprehensive approach to increasing the number of certificate or degree completers. Their program, Connecting to Success, seeks to improve student success measures by targeting the root causes of low performance in those areas. They propose a combination of services to increase the number of students obtaining a certificate or degree or transferring to a four-year school. These include academic tracking systems, additional advising for ESL students, and flipped classroom online and in-class activities.

Course completion and transfer are more specific to two-year colleges. The former usually referred to students completing a year one course sequence or developmental education coursework. ANNHs and HSIs showed the largest number of abstracts including this outcome measure (75% and 56% respectively). Many individual two-year institutions and cooperative programs between two and four-year institutions focused on both course completion and transfer as desired outcomes.

Specific transfer program efforts include a cooperative grant between two ANNH institutions, the University of Hawai'i at Mānoa and the University of Hawai'i Maui College. Titled Kekaulike ("to share equally, equality, equity, justice, mutual, to equalize, balance"). Among several goals, the program seeks to construct a "transfer bridge" between the two schools. To further this effort, the program also proposes providing additional academic support to those students interested in transferring.

As shown by Figure XX, other program outcomes were cited less frequently in the project abstracts reviewed. Student success appeared in 43% of HSI abstracts and 50% of PBI abstracts. While student success could be interpreted in different ways depending on the sector and level of the institution, the abstracts did not feature a definition of what the institution intended to achieve by this outcome.

Table 3. Project Outcomes.

	Retention/Persistence		Graduation/Degree Attainment		Course Completion		Transfer	
	Observations	Proportion	Observations	Proportion	Observations	Proportion	Observations	Proportion
AANAPISI	5	55.56%	8	88.89%	1	11.11%	1	11.11%
ANNH	11	91.67%	12	100.00%	9	75.00%	5	41.67%
HSI	55	57.29%	60	62.50%	54	56.25%	30	31.25%
NASNTI	3	42.86%	5	71.43%	1	14.29%	0	0.00%
PBI	24	92.31%	23	88.46%	0	0.00%	0	0.00%
Total	98	65.33%	108	72.00%	65	43.33%	36	24.00%
	Enrollment		Student Success		STEM		Health Care	
	Observations	Proportion	Observations	Proportion	Observations	Proportion	Observations	Proportion
AANAPISI	0	0.00%	0	0.00%	0	0.00%	0	0.00%
ANNH	5	41.67%	4	33.33%	0	0.00%	0	0.00%
HSI	6	6.25%	28	29.17%	19	19.79%	1	0.67%
NASNTI	1	14.29%	3	42.86%	1	14.29%	0	0.00%
PBI	8	30.77%	13	50.00%	16	61.54%	19	12.67%
Total	20	13.33%	48	32.00%	36	24.00%	20	13.33%
	Teacher Education		Non-Cognitive Ability		Community/Culture			
	Observations	Proportion	Observations	Proportion	Observations	Proportion		
AANAPISI	0	0.00%	0	0.00%	0	0.00%		
ANNH	0	0.00%	0	0.00%	4	33.33%		
HSI	4	4.17%	2	2.08%	1	1.04%		
NASNTI	1	14.29%	3	42.86%	0	0.00%		
PBI	6	23.08%	0	0.00%	0	0.00%		
Total	11	7.33%	5	3.33%	5	3.33%		

Other outcomes included curriculum redevelopment, focusing curriculum on STEM majors, and increasing enrollment in and graduates from teacher education or healthcare programs. Less common were abstracts mentioning improving non-cognitive student traits, increasing student involvement in local communities or fostering student appreciation of cultural issues. These mostly appeared in ANNH and NASNTI abstracts. For example, the University of Alaska Southeast, Sitka Campus proposed a all-encompassing approach to fostering student success entitled "Complete to Compete: A Holistic Approach to Student Success for Alaska Native and High-Need Students". With "five goals and 28 measurable, realistic objectives drawn from locally-based needs assessment and strategic planning, a research-based logic model, and a strong external evaluation", the program seeks to prioritize student success while fostering a sense of "community and institutional identity".

Many MSI programs focus on several outcomes with different mechanisms. For instance, the University of Illinois- Chicago proposed a comprehensive AANAPISI program that incorporates several different outcome measures. The Pipeline for Asian American and Native American Pacific Islander program ("UIC PASS") seeks to "recruit, retain, graduate, and enhance the college experience of AANAPI students, who remain under-served and marginalized at UIC, and as largely first-generation, low-income, immigrant students, are "at risk" for high rates of college attrition". Key to the program is forming partnerships with various departments within the school as well as organizations beyond campus.

6.2. Project Mechanisms

Table 4 shows the common project mechanisms that appear in the project abstracts. As noted above, a project mechanism refers to the way in which an institution intends to carry out its project outcomes. The most common mechanism across abstracts was professional development for faculty to better serve MSI students (41%). This category also included professional development for administrative staff and in some instances, hiring administrators to run MSI-focused centers or programs. By far the MSI proposing to adopt this mechanism were ANNHs (83%). Kapiolani Community College in Honolulu, HI discussed professional development as a key component of a holistic program called "Kauhale Ke Kuleana (the Responsibility of the Whole Village)". Similar to other ANNH programs emphasizing the importance of culture and community, Kapiolani also stresses professional development of faculty members and staff to better suit various academic needs of Native Hawaiian students. Part of this project is an effort to preserve the Native Hawaiian language through course offerings.

Another popular mechanism was improving the data capacity and technology of MSI campuses (39%). This takes many forms throughout the abstracts. For example, a cooperative grant between the Los Angeles Valley College, East Los Angeles College, and Los Angeles Trade -Technical College, HSIs all-based in California, emphasizes the improvement of academic practices to increase student retention. Key to this effort is the development of assorted technology-centered endeavors, including an online learning system, multimedia interaction, and other technological modes to improve student engagement.

Advising/counseling (33%) and academic support (32%) were also common project mechanisms. These tended to not be used interchangeably. Advising/counseling could be interpreted as a form of academic support, though institutions mentioning academic support tended to not make this distinction. The majority of MSIs suggested providing either advising/counseling or academic support, with HSI abstracts including fewer mentions.

Table 4. Project Mechanisms.

	Center		Tutoring		Advising/Counseling		Career Coaching	
	Observations	Proportion	Observations	Proportion	Observations	Proportion	Observations	Proportion
AANAPISI	3	33.33%	6	66.67%	5	55.56%	0	0.00%
ANNH	7	58.33%	4	33.33%	7	58.33%	2	16.67%
HSI	12	12.50%	6	6.25%	17	17.71%	12	12.50%
NASNTI	4	57.14%	4	57.14%	4	57.14%	1	14.29%
PBI	1	3.85%	5	19.23%	16	61.54%	4	15.38%
Total	27	18.00%	25	16.67%	49	32.67%	19	12.67%
	Technological Improvement		Precollege Outreach		Academic Support		Mentoring	
	Observations	Proportion	Observations	Proportion	Observations	Proportion	Observations	Proportion
AANAPISI	1	11.11%	4	44.44%	4	44.44%	2	22.22%
ANNH	8	66.67%	6	50.00%	7	58.33%	1	8.33%
HSI	39	40.63%	8	8.33%	22	22.92%	5	5.21%
NASNTI	1	14.29%	2	28.57%	4	57.14%	1	14.29%
PBI	9	34.62%	4	15.38%	11	42.31%	12	46.15%
Total	58	38.67%	24	16.00%	48	32.00%	21	14.00%
	Online/Distance Education		Data Improvement		Professional Development		Remedial Courses	
	Observations	Proportion	Observations	Proportion	Observations	Proportion	Observations	Proportion
AANAPISI	0	0.00%	0	0.00%	1	11.11%	0	0.00%
ANNH	8	66.67%	1	8.33%	10	83.33%	0	0.00%
HSI	26	27.08%	12	12.50%	38	39.58%	7	7.29%
NASNTI	4	57.14%	0	0.00%	2	28.57%	3	42.86%
PBI	0	0.00%	8	30.77%	10	38.46%	16	61.54%
Total	38	25.33%	21	14.00%	61	40.67%	26	17.33%

Improving or extending online education or distance education services comprised the next largest mechanism at 25%. This appeared with more frequency in ANNHs (66%) and NASNTIs (57%). This is not surprising, given that many of such MSIs are located in remote regions. Programs focusing on serving students in education deserts include Northeastern Oklahoma A&M College in Miami, OK. Its project abstract notes the high level of poverty in its region. It proposes several mechanisms to increase student success, through the improvement and expansion on online degree options, extensive student support services, and the promotion of Native American culture and language preservation.

Another less common though still reoccurring mechanism was the creation of a center to focus all MSI student-centered activities. 58% of ANNHs and 57% of NASNTIs proposed creating a center. As with student success, the description of such a center varies considerably between institutions. For example, Augusta Technical College, a two-year PBI in Augusta, GA, proposed the creation of the Center for Learning and Academic Support Services (CLASS). This center would emphasize the improvement of math and writing among students with the goal of increasing the school's retention rate.

Another infrequently reoccurring mechanism that warrants further inspection is the development of pre-college outreach programs. This comprised 16% of all MSIs, with 44% of AANAPISIs proposing this as a mechanism to advance MSI student success. The University of Minnesota, Morris proposes using summer bridge programs to increase access to their institution. Through the program "Morris Native American Student Success (NASS)", the four-year public NASNTI focuses in advancing the degree attainment of its Native American students. Chief among this effort is the expansion of the school's summer bridge program to ease transition to college through academic advising and peer mentors.

7. Discussion

According to resource dependence theory, individuals or institutions must rely on external organizations for their survival. This is especially true of higher education institutions, in particular MSIs. We would also expect MSIs to behave similar to other MSIs, based on new institutionalism. The results of this study suggest that based on project abstracts and descriptive statistics, MSIs do indeed act in a manner that is consistent with the tenets of this study's theoretical framework. Though it is beyond the parameters of the research design to explore the intent of those MSI officials creating project abstracts, it seems clear that they learned from other MSI project abstracts. Based on the assessment of this content as well as longitudinal analysis of federal funding, MSIs must continue to rely on federal government support. The extent to which an individual MSI depends on such funding varies. Yet the likely continued overall decline in most state funding would suggest that more MSIs and more eligible MSIs will seek a Title III or Title V MSI grant.

Most would argue that the common goal of college is to graduate students. For at least the past decade, college completion has become a priority in public policy for higher education in addition to popular media accounts of higher education [65,72]. Considering the ongoing public narrative that emphasizes college completion, it is not a surprise that MSIs tend to include degree attainment and student retention as primary outcomes for their federally funded programs. Advocacy organizations continue to push for policymakers to emphasize the importance of increasing the number of postsecondary certificate or degree holders. Extensive research has demonstrated how this has influenced policymakers throughout the U.S. at both the state and federal levels [50,73]. A popular state finance approach to incentivizing institutions to increase the number of college completers is performance-based funding [74]. Empirical research mostly finds a null or negative impact of pay-for-performance as it has thus far been implemented towards higher education [75]. Yet MSIs are especially vulnerable to such accountability policies that tend to penalize institutions enrolling a larger share of academically underprepared and lower-income students [76–78]. Given the current context of prioritized college completion and increased tenor of accountability, it stands to reason MSIs will continue to focus on completion and retention in all sectors and levels of higher education.

Though most MSI project abstracts highlight measurable outcomes such as graduation rates and workforce training, many also emphasize not as easily quantifiable goals including community and culture. These have been hallmarks of MSIs and are often seen as the secret to how these institutions have been able to graduate a higher number of students of color. Infusing programs that prioritize student success through connections to community and incorporation of culture can lead towards increased quantifiable outcomes. As MSI program abstracts demonstrate, MSIs prioritize student outcomes through programs that give primacy to student backgrounds. They also address local economic needs through curriculum focused on STEM, teacher education, and healthcare employment.

While project abstracts share many similarities across MSI category and sector and level, there are notable and expected differences. This occurs mostly between sector and level, with exceptions. We would expect community college MSIs to focus on local workforce needs. PBIs largely reflect this. Building bridges to local high schools and community organizations is another reoccurring element in MSI two-year institutions. Yet the community focus also appears in four-year public schools, such as the University of Illinois, Chicago. It becomes clear through the project abstracts that most MSIs recognize they are institutions existing within communities that benefit from the college as much as the institution benefits from the community.

It is impossible to predict the shape of federal funding for MSIs to come. Funding levels have not decreased significantly for any Title III or Title V category. Yet funding levels have also not increased significantly. While MSIs should continue to apply for competitive grants and eligible MSIs should especially apply, it is unrealistic to expect a federal windfall. Current federal proposals to institute a performance funding policy aimed specifically at recipients of Title III and Title V funding would have a substantial impact on all U.S. MSIs. Yet an important lesson can be learned through a closer inspection of the evolution of federal legislation for MSIs. This evolution partly explains why each category of MSI is funded at different levels. The disparity in MSI funding per MSI classification is likely revealed through the politics of policymaking. HBCUs received federal policy recognition with the Higher Education Act of 1964. This resulted from decades of work on the parts of many fighting for this goal. HSIs grew from similar political struggle, as noted above. AANAPISIs and other MSI categories also found recognition, but only after political outreach. This topic demands additional research. Yet it appears that those institutions that form coalitions and form alliances with politicians stand a much better chance of receiving more federal funding.

The various project mechanisms and outcomes explored in this study connect to a broader product of students enrolling in and graduating from MSIs. As other researchers demonstrate, MSIs appear to be engines of upward social mobility [79]. In their recent work on mobility in higher education, Chetty et al. include eight MSIs in their top ten colleges that showed substantial improvement in the social mobility of students of color and low-income students [79]. In exploring the Chetty et al. study, Hillman examined the social mobility rates of institutions in the California State University system [80]. The majority of these campuses are MSIs. Nearly half of students in some schools within the CSU system were found to rise in social mobility. Next to California, Texas is the state with the most MSIs. Boland found higher rates of upward social mobility in Texas MSIs compared to those in California [81]. This applied to both two and four-year MSIs in the state.

8. Recommendations

8.1. Recommendations for Practice

As noted above, it is critical for MSIs to forge alliances with state and federal policymakers. Numerous studies demonstrate the impact of policymaker influence on public policy for higher education [50,73,82]. MSI administrators should strive to boost their political capital by investing in outreach to politicians working within their respective districts. HBCUs and HSIs have excelled at developing relationships with politicians who have supported and advocated for these institutions at all political levels [83]. As the evolution of HBCUs and HSIs reveals, creating coalitions among

institutions has been a critical step in advancing their causes [84]. Neither would have persevered had they not aligned with one another first and then sought to win influence within the federal political realm. All MSIs can learn from their example.

Another recommendation for institutions applying for a competitive MSI grant is to develop specific targets and explicit outcomes for their proposed MSI programs. The Department of Education does not offer information on how many of the project abstracts received funding for their institutions. The number of awards per year indicates that most do indeed gain federal funding. Yet it is imperative that MSIs comprehensively document precisely what they intend to do with the funding and what they hope to achieve through their federally funded programs. An emphasis on incentives-based funding and ROI reveal that quantifying inputs and outputs will be essential to a successful proposal in the years to come.

Finally, institutions that are designated as MSIs should look to their MSI programs as opportunities to scale up such programs. MSI programs target a specific population of students depending on the category of MSIs. Hence, not all enrolled students in the institution can benefit from the federally funded program. Yet there are lessons to be learned that could be applied to the entire school. Paramount among these is the approach towards ensuring success on the part of traditionally underserved student populations. This is an area that MSIs have been shown to excel at. All institutions of higher education can benefit the entire student body based on such best practices.

8.2. Recommendations for Research

There are three primary avenues for future research based on this study. First, little is known about how institutions go about creating their project abstracts or constructing services based on the receipt of federal funding. Qualitative research can provide a valuable function in interrogating how different categories of MSIs approach their project abstracts and decisions on what most necessitates the focus of the MSI grant. On the other side of the equation, no extant research has trained a lens on how the Office of Postsecondary Education reviews MSI project abstracts and makes decisions on awards. Either vantage point could contribute immensely to both researchers and practitioners.

Second, few studies have examined MSI outcomes across different MSI categories. Less have employed quasi-experimental quantitative research designs to estimate the relationship between the receipt of federal funding and outcomes such as degree completion or retention. As explained earlier, policymakers demand an evidence-based approach towards funding colleges and universities. As flawed as many of such funding mechanism have been throughout the states, the increasing popularity of pay-for-performance in higher education proves the necessity of demonstrating the impact of MSIs through rigorous research designs.

Third, research studies using different methodological strategies are necessary to analyze the potential relationship between the embrace of an MSI identity and student success. Researchers have only just begun exploring how institutions do and do not acknowledge their MSI status. Content analysis could be useful in exploring college promotional materials for an indication of whether or not they are an MSI. Quantitative studies could reveal potential causal links between such an embrace and outcomes.

9. Conclusions

As the number of MSIs continues to grow, it is important to assess how and how well these institutions serve their students. This study is one attempt to investigate the approaches MSIs take to carry out their federally funded missions. These missions reveal what MSIs prioritize in forwarding programs to advance student progress. While MSI programs echo strategies to further student success throughout U.S. higher education, much remains to be learned about how specifically MSIs have and can continue to support students of color through the many layers of U.S. postsecondary education. The design of policies at the institutional and public levels must be informed by finer grained analyses of the architecture of MSI programs to meet current and future demands of higher education.

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