

KUAHUI A KŪ KA HALE: COMPREHENSIVE EVALUATION OF TITLE III ANNH PART A AND PART F IMPLEMENTATION AND IMPACT ON NATIVE HAWAIIAN STUDENT SUCCESS, 2008 - 2014

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EXECUTIVE SUMMARY

In the autumn of 2015, the University of Hawai'i (UH) was awarded a supplemental grant by the U.S. Department of Education's Title III program to conduct a system-wide evaluation of the Title III-funded programming and projects on each UH campus between 2008 and 2014. The federal Title III program provides funds to post-secondary institutions serving Native Hawaiians and Alaska Natives in order to increase institutional capacity to support student success. In brief, the evaluation sought to discern what impacts the Title III program had on both campuses and students over the period under evaluation.

A team consisting of six UH faculty and staff, two graduate assistants, and one external evaluator began collecting data and information starting in January 2016. Key activities included performing literature reviews; examining all associated campus Title III grant documents; crafting and administering surveys to students, faculty, and staff; conducting focus groups and interviews with administrators, faculty, staff, and students; and, analyzing student-level academic records to discern any influences of Title III program participation on key student success outcomes.

INSTITUTIONAL CAPACITY

Breadth and depth. According to grant documents maintained by each campus and the UH Office of Research Services, 44 Title III grants were active during the evaluation period spanning from January 2008 to December 2014. During that period, campuses reported that Title III activities resulted in 22,949 student experiences; 2,526 faculty/staff professional development experiences; 128 events; construction or renovations of over 35,353 square feet of campus facilities; purchase and distribution of 21,629 educational materials; and creation or revision to 627 curricula. All ten UH campuses were represented among the 44 grant awards during the period of evaluation.

Highlights. Over one-third of the \$62,230,895 total Title III grant funding (\$24,486,143) provided renovations to existing campus facilities in the form of additional space, technology upgrades, or laboratory/studio facilities. These renovated spaces were acknowledged by many survey and focus group participants as having had a substantive effect on their experiences, both with respect to achieving their educational goals and with feeling a sense of belonging on campus. Renovations, along with revisions to curricula and the professional development to deliver the revised curricula, played critical roles in building institutional capacity over the period of evaluation. Accordingly, nearly 7 out of 10 faculty and staff surveyed (69 percent) reported that they had witnessed improved institutional capacity in supporting Native Hawaiian student success over the period of evaluation.

STUDENT SUCCESS

A survey of 1,191 students who attended any campus within the UH system during the period of evaluation revealed that nearly all who had participated in Title III programs (98 percent) would eventually earn their desired degree, compared with only 70 percent of those who did not participate in such programs. Moreover, survey respondents who interacted in Title III programming, attended Title III events, or made use of Title III resources reported significantly higher levels of sense of belonging and identity formation than other respondents. A common theme among both students

and staff/faculty concerned the nurturing environment Title III programming and resources created on campuses throughout the system.

Community colleges. More focused inquiries of possible impacts of Title III programming on student outcomes examined first-year experience programs on multiple community college campuses, as well as transition programs to ease transfers from UH community-colleges to any of the UH system's three universities.

Based on a comprehensive data set of de-identified academic records for the 142,807 students enrolled on UH campuses between Fall 2008 and Fall 2016, an extract of community college students for whom first-year experience programs were available yielded 84,383 records, which was subsequently whittled down to 17,328 records consisting of matched cases. Multivariate regressions on the matched-case file sought to discern any substantive influence of first-year experience participation on conventional measures of student success: persistence, achievement, and completion.

The **persistence** models examine the completion of academic years and returning for subsequent years. In the full matched-case data set, first-year experience showed no significant association with finishing early years, but did demonstrate significantly positive results in later years. In the Native Hawaiian subsample, however, the odds are significantly positive from the start. Similar results pertain when applying a "timeliness" factor to the outcome. That is, instead of allowing two semesters – whether contiguous or not – to constitute the completion of one year, "on-time" requires that the two semesters occur contiguously in order to have achieved the outcome. These models, of the same first four years, yield similar significant gains for the entire sample, as well as the Native Hawaiian subsample.

The models for **academic achievement** look at the first four years of enrollment and use the cumulative grade point average (GPA) as the dependent variable. First-year experience participation is significantly associated with increases in GPA for the overall sample and the Native Hawaiian subsample. Beyond the first year, however, first-year experience shows no positive association.

The models for **college completion** are many, given that community colleges offer many forms of completion – e.g., certificates, certificates of achievement, associate's degrees, and transfers to four-year institutions – as well as ways in which they are measured. Both the overall sample and the Native Hawaiian subsample show positive effects of first-year experience participation in longer-term completion milestones, i.e., three-year and four-year time frames. This trend persists for similar models of transfer to four-year UH campuses or the summative measure of "success" – i.e., acquisition of any certificate or degree, or transfer to a four-year institution – each of which show substantially large increases in odds in the Native Hawaiian subsample.

Universities. Separate analyses focusing on UH university-level students – including both those students who entered post-secondary at a UH university and those who transferred from UH community colleges – expand the analysis of the possible impact of Title III-funding by looking at students who participated in first-year experience programs and/or 2-year to 4-year transfer programs. From the 126,948 records of those who enrolled at UH universities, a one-to-two matched subset of 4,306 students served as the basis for the upper-level analyses. A Native Hawaiian subsample was also created of the dataset.

Models of **persistence** take two forms: an accounting of semesters completed, whether contiguously or over longer stretches of time; and a version with full-time equivalent milestones, in which a student reaches a level of completed credits equal to that of a full-time credit load. The semester-based models yield only minor positive associations for two milestones, failing to reach significance otherwise. For the Native Hawaiian subsample, no semester-based persistence outcome witnesses any significant effect from Title III programming. In the credit-based persistence models, however, Title III participation produces substantial positive associations to achievement of the full-time equivalent milestones. In the Native Hawaiian subsample, these positive associations occur later, but are significantly large.

Models for **academic achievement** show virtually no association between Title III program participation and cumulative GPA over the years examined, whether among the overall sample or the Native Hawaiian subsample.

Models for **college completion** at the university level focus solely on the achievement of a bachelor's degree. Every measure of bachelor's degree acquisition is significantly and positively associated with Title III program participation in the overall sample. In the Native Hawaiian subsample, positive significant Title III influences are seen at longer-term milestones.

In sum, these matched-pair multivariate models demonstrate the compelling positive influence of Title III programming on student persistence and completion, whether at the community college level or the university level. While there are occasional significant associations with achievement outcomes, those models are dominated by prior achievement as the primary influencer.

IMPLICATIONS

Impact. These findings complement much of the qualitative and survey data gathered throughout the evaluation to provide considerable evidence of significant impact of Title III programs and projects on student success throughout the UH system. Moreover, owing to the sparse quantity and specificity of Title III participation data, these findings should be considered conservative with respect to the influence of Title III on both conventional and unconventional measures of student success. Recommendations include: campuses might consider partnering with other campuses to scale-up tested programs or projects; the UH system might consider supporting these efforts by developing data-gathering tools and management systems for campuses seeking to measure shared outcomes; and, the federal Title III Program might consider focusing reporting on outcomes rather than outputs, with guidance on established measures and tools.

Data & Information. Owing to the temporary nature of Title III, institutional memory, data, and documentation can be lost, and monitoring short- and long-term outcomes from Title III efforts may be unfeasible. Although some campuses have dedicated resources for program monitoring and tracking, comprehensive systems to aid in those efforts do not exist. Recommendations include: campuses might consider establishing plans for gathering and regularly monitoring performance data before or upon notice of a grant award; and, the UH system might consider providing coordination, information management, and consultation support to individual campuses to ensure that all external grant programs are fully explored for possible expansion or institutionalization.

Implementation. Despite the positive findings of the Title III efforts throughout the UH system over the past decade, considerable information gathered suggests that implementation was problematic for many grants, resulting in delays and no-cost extensions. The most frequently noted obstacles were related to administrative support, specifically in managing grant funds and in hiring required staff and faculty. Recommendations include: campuses might consider creating a clearinghouse of detailed information, tools, templates, and expert contacts that can serve as a resource for the entire UH community; and, the UH system might consider providing resources and information, if not dedicated support, to all externally funded programs in problem resolution, data management, and communications.

What works? Presently, the lack of detailed data on the specific components of Title III programming that were accessed by students prevents any determination of what activities, resources, or services actually contribute the most to Native Hawaiian student success. Understanding which strategies are critical, and which are less so, can help refine programming and free up resources to focus on what works. Recommendations include: the UH system might consider exploring the adoption of a UH-wide tracking system that can be used to determine levels of usage of various services and resources by students.

Sustainability. While renovations have been institutionalized, very few other Title III projects have transitioned to non-Title III funding. As a result, many programs come and go. Recommendations include: campuses might consider developing more aggressive transition plans; the UH system might get involved in those plans; and, the federal ED might consider incorporating sustainability planning within each grant cycle.

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INTRODUCTION

Na ka Hawai'i, no ka Hawai'i. By Hawai'i, for Hawai'i. This is a 21st century model that describes the current movement of utilizing and (re)creating narratives and praxis (Freire, 1993) from a uniquely Hawaiian worldview to foster abundance and sustainability in and with Hawai'i's peoples and places. While it is contemporary, it is also ancestral. As we look back at some of the most successful educational institutions in Hawai'i over time, especially in pre-US occupied Hawai'i, the model of *na ka Hawai'i, no ka Hawai'i* resounds. We utilize this model to capture the essence of Title III programming in the UH system for two main reasons: First, we have found that this is a common thread that connects all of the major successes of Title III programming in the UH system. Second, we have found that the most successful Title III strategies have roots in Hawaiian institutions of the Hawaiian Kingdom era and earlier.

PURPOSE

The University of Hawai'i System is the only comprehensive public university system in Hawai'i. Comprised of 10 campuses, including three baccalaureate-degree granting universities and seven community colleges, the University of Hawai'i System and each of its campuses have been recipients of Title III Alaska Native-Native Hawaiian (ANNH) funding for the last decade. The purpose of this evaluation is to examine the impact of Title III ANNH programs on Native Hawaiian student learning outcomes, with a focus on Summer Bridge programs and First Year Experience programs, and make recommendations for future project designs that meet What Works Clearinghouse (WWC) standards and can serve as opportunities for other institutions of higher education serving underserved and unique cultural student populations.

This project is comprised of three parts: (1) a comprehensive review of all [available] information and data from Title III programs throughout the UH System; (2) impact analyses of two system-wide Title III programs; and (3) strategic dissemination of project findings and recommendations.

BACKGROUND

U.S. DEPARTMENT OF EDUCATION TITLE III PROGRAM

Title III began in the 1960s, when discussion of equal educational opportunity for Limited English Proficient (LEP) students was first made public. Legislation arising from this Civil Rights Movement era argued that in order to create equal educational opportunity, students should be treated differently based on their individual needs; this includes school districts taking affirmative action to ensure that the native language of minority students did not inhibit their participation in the educational system, and that failure to provide adequate resources to overcome language differences was considered a denial of equal education.

Today, the University of Hawai'i (UH) system specifically uses Title III Part A and F funding for Alaska Native and Native Hawaiian-Serving Institutions. This program helps eligible institutions of higher education increase their self-sufficiency and expand their capacity to serve low-income students by providing funds to improve and strengthen the academic quality, institutional management, and fiscal stability of eligible institutions. Examples of authorized activities include: Purchase, rental, or lease of scientific or laboratory equipment for educational purposes, including instructional and research purposes; Renovation and improvement in classroom, library, laboratory, and other instructional facilities; Support of faculty exchanges, faculty development, and faculty fellowships to assist in attaining advanced degrees in the field of instruction of the faculty; Curriculum development and academic instruction; Purchase of library books, periodicals, and other educational materials; Funds and administrative management, and acquisition of equipment for use in strengthening funds management; Joint use of facilities, such as laboratories and libraries; and Education or counseling services designed to improve the financial literacy and economic literacy of students or the students' families.

HAWAII

In order to give context to Title III funding in the UH system, it is important to provide a brief overview of Hawai'i and its history. As Title III was created to address issues of inequality in education, a historical overview helps to describe the inequalities and some of the root issues of said inequalities. Furthermore, a slice of Hawai'i's history prior to educational inequalities demonstrates Hawaiian excellence in education and gives further context to the strategies used by UH campuses to address their regional issues.

Historical Educational Context

Native Hawaiians have been living in Hawai'i with complex and sustainable forms of community and government for nearly 100 generations (Kame'eleihiwa, 1992; Kanahale, 2011; Lili'uokalani, 1897). Their keen observations, trial and error experiments, and relational approaches to each other and their natural world allowed for them to build educational systems that created experts with in-depth knowledge in specific fields as well as generalists across the population. In addition, their strong affiliation with place supported the development of place-based and regional experts in areas including but not limited to fields that we now name as medicine, history, law, politics, art, oration, literature, biology, and engineering. These knowledge systems were passed down from generation to generation through oral and performance-based technologies without any written word. Indeed, Hawaiians were experts in their own forms of teaching and learning, well-equipped with ontologies, epistemologies, and methodologies that were relevant to their communities and environments.

For centuries Hawai'i was ruled by a series of chiefdoms, both regionally and eventually across islands. By 1810, Kamehameha I had brought all the Hawaiian Islands under his rule, establishing the Kingdom of Hawai'i. In 1840, under the leadership of Kamehameha III, Kauikoaouli, the first constitution of the Kingdom of Hawai'i was ratified. Over time, the Kingdom of Hawai'i had treaties with over a dozen countries, all of whom recognized the independence and sovereignty of the Kingdom.

Literacy rates

During the Hawaiian Kingdom era, a period of Hawaiian independence and global connections, Hawai'i flourished in many ways. For example, when Christian missionaries brought the printing press and an alphabet to Hawai'i in 1820, Hawaiians were quick to adopt it to their prolific culture of literature. Through an organized Hawaiian system of teaching and learning that included both serious learning as well as fun and festivities, Hawai'i in the 1800s – with a majority Native Hawaiian population – became one of the most literate nations in the world, surpassing the United States by at least 13 percentage points in 1832 (Laimana, 2011).

Hawaiian intellectual brilliance coupled with the power of the printing press quickly led to over 125,000 pages of Hawaiian language newspapers printed in more than 100 different newspapers between 1834 and 1948. During the nineteenth century other institutions such as the Honolulu Police Department and the Hawai'i Department of Education were also established under the leadership of the Hawaiian Kingdom. To be clear, these were Hawaiian institutions created by Hawaiians – via Hawaiian language and culture – that were for the benefit of Hawai'i's people and places. This continued the model of *na ka Hawai'i, no ka Hawai'i*.

Shifts in political and educational success

In 1893, a small group of American business men, with the help of the American military, illegally overthrew the reigning monarch, Queen Lili'uokalani, in a coup d'état. This was followed by the 1898 illegal annexation of Hawai'i to the United States. These two events closed the long period of *na ka Hawai'i, no ka Hawai'i* that once shaped the success of Hawai'i. Instead, a period began of foreign leadership for foreign interests. One result of this was the banning of all non-English schools. By 1902, there were no Hawaiian language schools left (Laimana, 2011). Instead, English-only schools were the sole choice for education, each with harsh punishments for speaking Hawaiian language and exhibiting Hawaiian behaviors. This began a long history of cultural genocide through the education system, ultimately with negative outcomes for Hawaiian children.

The creation of the University of Hawai'i

When The College of Agriculture and Mechanics of the Territory of Hawai'i was established in 1907 – later renamed The College of Hawai'i and finally The University of Hawai'i at Mānoa – it was established with the purpose to continue to serve foreign interests. Kamins (1998) explains:

Hawai'i, at the beginning of the twentieth century, needed an institution of higher learning. The further integration into the United States desired by those who had sided against the Hawaiian monarchy, if it was to work politically, required the further development of American culture here [Hawai'i]. (p. 3)

Hence, Kamins' analysis points directly to UH Mānoa's role of colonization (K. Maunakea-Forth, personal communication, ongoing) in Hawai'i rather than to create any foundation of strength and well-being for Hawai'i and her first people. Between the Hawai'i public school system and a single state university system, education in Hawai'i for the last one hundred years has created grave inequalities, with Hawaiian students often experiencing disproportionately high negative outcomes.

HAWAIIANS IN THE UNIVERSITY OF HAWAII SYSTEM TODAY

According to Kenolio (2019), Native Hawaiian students exhibit some of the lowest graduation rates throughout the University of Hawai'i system. The Hawai'i Graduation Initiative (University of Hawai'i, 2016), data revealed the graduation rate for the first-time full-time fall 2010 cohort at the 4-year degree granting institutions was 19 percent and 44 percent for 4-year and 6-year graduation (University of Hawai'i, 2016). Among Native Hawaiian students in the 2010 cohort, 9 percent graduated in 4-years and 40 percent graduated in 6-years. This dire problem of low graduation rates impacts the achievement goal of graduating Hawaiian students, as well as the total student population. This issue affects the University's commitment to increase the number of educated citizens in Hawai'i communities and provide graduates to address workforce development needs. This matter is critical and solving this problem is important for the University of Hawai'i because graduating students is one of the primary goals of the institution.

While much of the literature gathered on the subject of student retention and theories is based on the experience of students in a homogenous environment, the experiences of Native Hawaiian students and other students of color need to be further studied. The enrollment and retention data of Native Hawaiian students at the University of Hawai'i illustrates the importance of examining and identifying the challenges experienced by Native Hawaiian students within the contemporary educational system and programs that best support their success.

In addition to enrollment, Hawaiian student completion is critical to review. As of Fall 2016, one in almost every five students who earned a degree or certificate in the UH System are Hawaiian. There were 2,209 Hawaiian students who completed a degree in the UH System in Fall 2016 of the 11,286 total students. The 20 percent mark of degrees earned by Hawaiian students has been consistent from Fall 2014 through Fall 2016. The bulk of those degrees earned were at UH community colleges.

BOARD OF REGENTS POLICY

In 2009, the University of Hawai'i Board of Regents adopted a new policy to honor Hawai'i's indigenous people. The policy states in section C-3:

As the only provider of public higher education in Hawai'i, the University embraces its unique responsibilities to the indigenous people of Hawai'i and to Hawai'i's indigenous language and culture. To fulfill this responsibility, the University ensures active support for the participation of Native Hawaiians at the University and supports vigorous programs of study and support for the Hawaiian language, history, and culture.

This policy asserts the commitment the University of Hawai'i has to Native Hawaiian students, their learning, and their success.

STRATEGIC DIRECTIONS

Aligning with the University of Hawai'i Board of Regents policy, the University of Hawai'i Strategic Directions, 2015-2021 outlines and guides the university's priorities of Native Hawaiian student

success. Interwoven in the strategic directions is the University of Hawai'i's mission and commitment to being a foremost indigenous-serving institution. The first of four strategic directions defined in the University of Hawai'i Strategic Directions is the Hawai'i Graduation Initiative developed in 2010. The goal of the initiative is to increase the educational capital of the state by increasing the participation and completion of students, particularly Native Hawaiians, low-income students, and those from underserved regions and populations and preparing them for success in the workforce and their communities.

Specific action strategies detailed to address Native Hawaiian students under the Hawai'i Graduation Initiative include:

- 1) strengthening the pipeline and college readiness initiatives for Native Hawaiians through UH programs and partnerships; and,
- 2) implementing structural improvements that promote persistence to attain a degree and timely completion by reducing the gaps in college completion for Native Hawaiians and stabilizing the student support services for Native Hawaiians.

Both the University of Hawai'i Board of Regents Policy (2012) and the University of Hawai'i's Strategic Directions (2015) demonstrate the institutional commitment to Native Hawaiian students and their success

EVALUATION FOCUS

Owing to the stated purposes of the ED Title III Program to build institutional capacity in order to support student success toward a long-term goal of sustainable interventions, resources, and campus environments, the focus of this evaluation is to discern evidence of significant changes in institutional capacity, student success, and sustainability. In the specific context of the University of Hawai'i System, this evaluation answers the following research questions:

- 1) In what ways, and to what extent, have Title III efforts over the last 10 years across the University of Hawai'i System strengthened the capacity of the campuses to serve and strengthen Native Hawaiian student success?
- 2) What promising and best practices have been realized by Title III efforts?
- 3) What are the key variables associated with Native Hawaiian student success?
- 4) In what ways, and to what extent, have the UH System campuses institutionalized programs, services and positions piloted by Title III funding?
- 5) What are the recommendations for Title III programmatic activities to ensure rigorous and successful projects?

PRIOR STUDIES

POST-SECONDARY LITERATURE

Much has been written about post-secondary education outcomes, especially within the United States, and their benefits to individuals, families, communities, and nations. Considerations of minority students in post-secondary education sharpened considerably after the adoption of affirmative action admissions policies in colleges and universities following the Civil Rights Movement of the 1960s. Over the past 20 years, as more statistics – both in number and nuance – emerged suggesting that minority students were less likely to realized post-secondary success than their peers despite affirmative action, this line of research has grown. Post-secondary “success” was often defined in terms of successful entry to post-secondary institutions, academic performance upon entry, and persistence through to completion (i.e., certificate or degree). While nearly all such research investigates the multitude of factors as possible explanations for lower rates of minority student success (see for example, Astin, 1993, 2005, 2012; Creighton, 2007; Flowers, 2004; Hernandez & Lopez, 2005; Martin & Meyer, 2010; Spady, 1970; Tierny, 1992; Tinto, 1975, 1987, 2012; Titus, 2006), the publication of Bowen and Bok’s analyses of college and university outcomes among minority applicants (1998) spurred increased efforts to understand the post-secondary minority student experience. In 2003, Massey, Charles, Lundy, and Fischer furthered this work by tracking cohorts of college freshmen of multiple races/ethnicities through their post-secondary experiences by means of the National Longitudinal Survey of Freshmen (NLSF) instrument. Through routine administrations of the survey, the team explored multiple factors commonly associated with post-secondary success. The team included representative numbers of students from multiple race/ethnicity groups, to be tracked over the course of their post-secondary journeys (nlsf.princeton.edu). The authors found that many combinations of factors were associated with various measures of student success (e.g., academics, persistence, sense of belonging) among the race groups examined, validating earlier findings and adding to the body of knowledge by acknowledging the influence of residential and educational segregation in childhood, as well as the heterogeneity of certain race/ethnic groups.

INDIGENOUS/MINORITY EDUCATION LITERATURE

Owing to the mandate of Title III to improve capacity to support Native Hawaiian student success, it is necessary to consider the ways in which “success” may be defined across different population groups.

A review of recent education research and practice materials related to educational success in indigenous communities suggests that other outcomes may weight equally, if not higher, than the standard set of outcomes that prevail in the post-secondary education literature: namely, access to post-secondary institutions, achievement, persistence, and completion. While these four indicators are valued, indigenous post-secondary students and communities also voice more culturally responsive outcomes that may have unique cultural or socio-emotional importance for them. Prevalent among the additional culturally responsive indicators of success are sense of belonging, leadership, collective kuleana, and identity formation.

Sense of belonging has multiple meanings and contexts. It can range from one's relationship to oneself; to an affinity to family, friends, professors, and communities; to the connections to the past, present, and future. On average, Native American and other indigenous post-secondary students experience significantly lower levels of sense of belonging than their peers (Johnson et al., 2007). Considerable indigenous literature attests to the importance of sense of belonging in promoting educational success, such as persistence and completion (Museus, Yi, & Saelua, 2017, Strayhorn, 2012;), as well as overall well-being (Brendtro, Mitchell, & Jackson, 2014; Claypool & Preston, 2011; Kaiwi & Kahumoku, 2006).

Like sense of belonging, leadership has many meanings. Ching and Agbayani (2012) note that cultural definitions of leadership between Pacific Islanders and Westerners often conflict, resulting in fewer opportunities for growth among the former, given that the Western definition typically prevails. While some have attempted to create definitions of Native Hawaiian leadership and instruments with which to measure it (Borofsky, 2010; Kaulukukui & Nāho'opi'i, 2008), no generally accepted definition is in common use. However, Lipe (2014) provides greater insight to the importance of leadership within the Native Hawaiian community, its relevance in higher education, and the threats Western definitions and measures pose to Native Hawaiian leadership growth. In the context of this evaluation and its data analyses, leadership is most closely associated with educational agency, in which undergraduates are able to effectively manage the responsibilities of both higher education and adulthood. This may take the form of seeking help when necessary, making use of resources available on or off campus, or helping others in need of academic assistance.

Kuleana (privilege or responsibility) is a strong sense of both obligation to and appreciation for the knowledge, skill, character, and opportunities that one possesses. Consistently, these traits are manifested in several external-facing ways, such as leadership, stewardship, and caring for family, 'āina (the land), community, and lāhui (Native Hawaiian population). Belgarde, Mitchell, and Arquero (2002) content that American Indian education is intimately tied to family, community, and place, and that all benefit when actively engaged in the journey. Scanlan (2013) echoes the value of connection to culture, family, and community as an essential ingredient in the success of Native Hawaiian post-secondary students. Serpell (2011) cites "social responsibility" as a critical measure of not only post-secondary success, but overall well-being.

The final category of culturally responsive success indicators is identity formation. In essence, many indigenous communities cite fears of repressive institutions of higher education that would seek to erase the cultural heritage and ancestral connections of the students they admit, forcing them into a Westernized mold of their selves. Several indigenous education researchers posit that institutions of higher education should not simply preserve the cultural and ethnic identities of their students, but should nurture them (Akweks, Bill, Seppanen, & Smith, 2010; Ching, & Agbayani, 2012; Freitas, Wright, Balutski, & Wu, 2013;) Syed, Azmitia, & Cooper (2011). Syed (2010) also suggests that an indigenous student's identity growth can be enhanced or limited, depending on the field of study chosen. White & Lowenthal (2011) cite differences in language – a principal element of culture – as being significant enough to influence post-secondary outcomes among minority undergraduates.

In the case of Hawai'i, it should be noted that the Hawaii State Department of Education has adopted the Nā Hopena A'o standards in its approach to all learners in its schools, which includes elements of each of the four culturally responsive success indicators cited above

(www.hawaiipublicschools.org). Similarly, Hawaiian-focused public, charter, and private schools have also adopted the Nā Honua Maoli Ola guidelines, which also reference each of the indicators above (www.olelo.hawaii.edu/olelo/nhmo.php).

SIMILAR STUDIES

At the time of the launch of this evaluation, The What Works Clearinghouse, a unit within the U.S. Department of Education's (ED) Institute of Education Sciences (IES), had no publicly available assessments of the merit of post-secondary programs that show promise in supporting students in their pursuits of their post-secondary goals. However, over the course of this effort, three intervention reports were published that found instances in which First-Year Experience, Summer Bridge, and Summer Counseling programs show potentially positive influences with respect to credit accumulation, persistence, and degree attainment beyond secondary schooling (U.S. Department of Education, 2016a, 2016b, 2018).

Exploring the strategies and resources that align with both Native Hawaiian educational philosophies and the prevalent indicators of success adopted by school systems is not a recent phenomenon in Hawai'i. Research seeking to discern "what works" has been the beneficiary of the Native Hawaiian scholars and kūpuna (elders) who have shared their knowledge with subsequent generations. However, the vast majority of this work has focused on primary and secondary education.

In 2015, Kana'iaupuni, Ledward, and Malone presented their research on the influence of culturally grounded teaching on middle- and high-school students throughout the state of Hawai'i. The findings revealed strong correlations between school and teacher Hawaiian cultural influences on both academic and socio-emotional outcomes among not only Native Hawaiian middle- and high-school students at public, charter, and private schools across the state of Hawai'i, but also among their non-Hawaiian peers.

Fortunately, the research on Native Hawaiian post-secondary education has increased over the past two decades, and appears to be growing in both breadth and number. Although the work continues in earnest, several prior studies played a significant role in designing this evaluation effort.

Makuakane-Dreschel (1999) investigated factors influencing Native Hawaiian student persistence while attending University of Hawai'i community colleges, noting that finances, prior high school, course loads, grades, and community college campus influenced continued enrollment. Oliveira (2005) examined outcomes among Native Hawaiian private school students entering post-secondary education and found that prior academic achievement in high school – notably grades and STEM classes – was positively associated with persistence and completion. Hokoana (2010) built upon this growing literature by exploring the possible influences of Hawaiian culture grounding as a protective factor when navigating the post-secondary journey. His research found that Native Hawaiian students professed to encountering difficulties but were bolstered by their cultural identity. Further, campus services that provided a greater sense of Hawaiian perspectives were reported to be more helpful than others.

In 2010, Hokoana questioned whether Native Hawaiian students face the same type of barriers to college that other students face and if they seek assistance from the same types of support networks.

The study also asked if Native Hawaiian and non-Hawaiian students believe having a good understanding of their culture helps to be successful in college. Hokoana (2010) found Native Hawaiians and non-Hawaiians experience the same barriers to college success and seek similar services for support. Differences among Native Hawaiians and non-Hawaiians were found based on financial aid and socio-economic status. During the interviews of Hokoana's (2010) study, Native Hawaiian students shared that having a good understanding of their culture assisted them to be successful in college, and campus programs and services that integrated Hawaiian culture pedagogy assisted them better than those that did not.

At the time of the supplemental grant award for this evaluation, colleagues at California State University-Long Beach conducted a similar evaluation of Title V programs within the larger Cal State system.

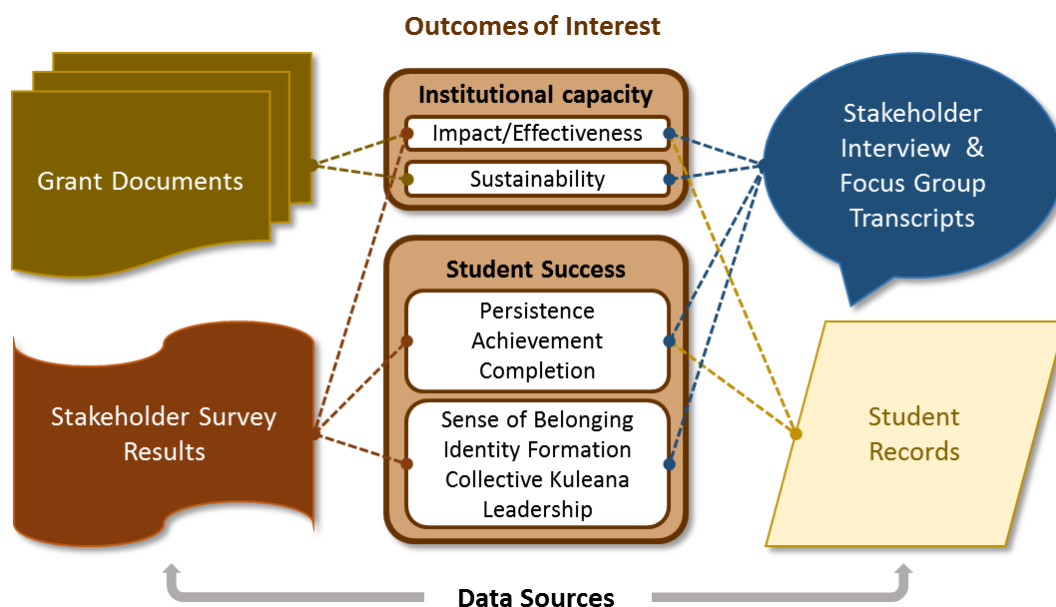
Additionally, two co-authors of this report and members of the evaluation team – Ellen Lokelani Kenolio and Leslie Lynn Opulauoho – conducted research for their doctoral dissertations using portions of the data analyzed for this evaluation. Lokelani (2019) explored the influences that Title III-funded First-Year Experience (FYE) programs may have had on the persistence and completion of UH community college students. Opulauoho (forthcoming) examined any positive influences of Title III-funded FYE and/or community college-to-university transition programs (TXP) among UH community college transfer students success. The results from both of those studies are included in this report.

ANALYSES

The general approach, and overall philosophy, of the proposed work is to triangulate (“quadrangulate”?) data and information gathered from four principal data sources via evaluation activities that can draw a clear picture of the overall impact of Title III programming throughout the University of Hawai‘i system over a fixed period of evaluation: AY2008-09 to AY2014-15. These evaluation activities and data sources are:

- Review of the existing **grant documents** on all Title III activities – including grant award notifications, annual project reviews, and program materials – across all UH campuses for the period under evaluation to determine magnitude, scope, and duration of activity implementation;
- Quantitative analyses of **stakeholder surveys** among both students and faculty/staff attending and/or employed during the evaluation period in order to assess any significant changes in key variables related to student success and institutional capacity;
- Qualitative analyses of **stakeholder interviews and focus groups** among students, faculty/staff, program leaders, and campus administrators to elucidate and expand upon information and data gleaned from initial campus visits, document review, student surveys, and faculty/staff surveys; and,
- Impact analyses of individual-level **student records** for students enrolled during the period of evaluation, linked to participation data for two Title III-funded transition programs (i.e., first-year experience and community college-to-university bridge programs).

Figure 1 Simple schematic of analytic design.



To complete these tasks, several preliminary activities were necessary in order to effectively begin collection and analyses of information and data. First and foremost, an evaluation team was assembled by University of Hawai'i leaders who crafted the initial project proposal and would go on to serve as the Advisory Board for the endeavor. The evaluation team consisted of a UH project coordinator/liaison, a contract administrator, two graduate research fellows, three graduate assistants, an institutional research liaison, a web developer, and an external evaluator/researcher. Upon formation and review of the evaluation plan, the first primary activity of the evaluation team was to establish contact with each UH campus in order to orient campus administrators and Title III administrators and staff of the evaluation's purpose, activities, timeline, and (most of all) inclusion of and communication with each campus as part of the overall process. All ten campuses of the UH system were visited within the early months of the project, and the evaluation team made it a priority to answer any questions that arose throughout the term of the project. Once the orientation to the project was delivered, and relationships between the evaluation team and each campus were established, the requests and collection of data could occur more smoothly. Further, based on input from the campuses, the data collection and analysis plans were modified based on significant discoveries about UH data systems, retention policies, administrative processes, and other information that directly related to the execution of the project.

DOCUMENT REVIEW

METHODS

After establishing contact with each campus, the evaluation team sought to discern the specific Title III grants that were active during the evaluation period between AY2008-09 and AY2014-15. To do so, the team simultaneously requested any documentation related to Title III grants from both individual campuses and the UH System's Office of Research Services (ORS, based on the UH Mānoa campus).

A listing of all Title III grants was delivered to the evaluation team by ORS and served as a checklist for all the documents received from the campuses. Ultimately, 44 Title III grants across all 10 UH campuses were active during some part of the period under evaluation.

It should be noted that the task of locating documentation from past Title III grant awards proved difficult for some campuses. The temporary nature of Title III grants, which are not generally renewed after the termination dates of the awards, can result in informal archiving of old files and turnovers in staff that can result in loss of institutional memory. For some campuses in which the current Title III staff were relatively new, locating the files from the 2008-2014 period was a burden. Ultimately, in those cases in which Grant Award Notifications (GANs) and Annual Performance Reports (APRs) could not be located for specific grants, the evaluation team requested archived copies of those documents directly from the ED.

DATA

The data contained in the most prevalent documents, GANs and APRs, provided three key pieces of information for each year of the grant award: a line-item budget, a list of outputs¹ associated with the promised activities, and some contextual information about the execution and purpose of those activities.

Data from the GANs and APRs were entered into an Excel workbook in order to discern the magnitude and cost of the activities undertaken under each grant. These data were divided by campus and year, and further subdivided by nine Legislative Allowable Activities (LAAs):

- 1) Purchase, rental, or lease of scientific or laboratory equipment for educational purposes, including instructional and research purposes;
- 2) Renovation and improvement in classrooms, libraries, laboratories, and other instructional facilities;
- 3) Support of faculty exchanges, faculty development, and faculty fellowships to assist in attaining advanced degrees in the field of instruction of the faculty;
- 4) Curriculum development and academic instruction;

¹ Outputs refer to data that provide evidence that the activities did, in fact, occur. These include numbers of events held, numbers of participants, numbers of square feet renovated, etc. However, the outputs should not be confused with outcomes, which generally provide evidence that some change or impact has occurred as a result of an activity.

- 5) Purchase of library books, periodicals, and other educational materials;
- 6) Funds management, administrative management, and acquisition of equipment for use in strengthening funds management;
- 7) Joint use of facilities, such as laboratories and libraries;
- 8) Academic tutoring and counseling programs and student support services; and,
- 9) Other activities (described in detail).

FINDINGS

According to grant documents maintained by each campus and the UH Office of Research Services, 44 Title III grants were active during the evaluation period spanning from January 2008 to December 2014. Table 1 presents a summary of the number of Legislative Allowable Activities for which the 44 Title III grants applied for funding during the evaluation period, as well as the total budgets for each category.²

Table 1 Univ. of Hawai'i Title III budgets and activities: 2008-2014

Legislative Allowable Activities	Num. Line Items	Total budget
TOTAL	275	\$60,261,496
Administrative management	34	\$2,588,141
Curriculum development	48	\$8,288,793
Direct student services	51	\$19,222,532
Educational materials	37	\$1,862,030
Professional development	40	\$1,735,737
Renovation	33	\$22,569,120
STEM equipment	13	\$1,585,849
Other	16	\$2,409,294

Over one-third of the \$62,230,895 total Title III grant funding (\$24,486,143) provided renovations to existing campus facilities in the form of additional space, technology upgrades, or laboratory/studio facilities. Renovations, along with revisions to curricula and the professional development to deliver the revised curricula, played critical roles in building institutional capacity over the period of evaluation. During the evaluation period (2009 to 2014), annual reports cite the outputs of renovation projects using two metrics: the number of square feet affected by renovations, or the number of rooms or buildings renovated. A total of 87 rooms or facilities were renovated during the evaluation period, in addition to 35,353 square feet of other spaces.

Direct student services accounts for the second highest funding amount over the evaluation period (\$19,222,532). Annual performance report data reveal that direct student services provided 22,949

² Table 1 lists brief descriptors of each formal Legislative Allowable Activity provided through the Title III Program for the sake of brevity.

student experiences during the period. The term “student experiences” represents the number of beneficiaries of a specific Title III student service under a grant. It does not refer to the total number of students served since each report of students served can include those already served in another activity under a grant. As a result, “student experiences” refers to every time a student was as a beneficiary of a Title III activity, even if that student has already been counted elsewhere.

Other Legislative Allowable Activities line items of note include Professional Development. Although this activity is specifically designated for faculty professional development, many of the grants used the “Other” category to report professional development activities for staff and student workers as well. As a result, 2,526 professional development experiences (among faculty, staff, and students) can be counted among the annual performance reports during the evaluation period.

Title III activities included event offerings, some of which provided professional development, others that provided enrichment for students, and those that were open to the community. During the evaluation period, 128 events were sponsored by Title III professional development, student services, or “other” line item activities.

Finally, Title III provided \$1,862,030 for the acquisition of 21,629 educational materials (including digital) and \$8,288,793 in support of revision or creation of 627 curricula in the UH system.

While the data gathered from annual performance reports and other grant documents is informative – especially as a means for the evaluation team to orient themselves to the breadth of activities undertaken through Title III funding – the data are generally limited to outputs. That is, the data provide evidence that planned activities occurred and rough measures of what those activities produced or of how many people were affected by them. For this reason, the evaluation team relied more heavily on the primary data collection activities and retrospective student records analyses to discern unique outcomes of Title III-funded programs and projects within the UH system.

SURVEYS

The evaluation fielded two surveys: one of students enrolled during the period of evaluation; the other of staff and faculty who were employed during the period of evaluation. The surveys provide information that cannot be ascertained from other data sources – e.g., students’ economic, social, and academic contexts during their enrollment at UH, or staff perspectives of institutional capacity during their employment at UH – or serve as supplemental data that can provide greater context to data gathered by other means.

STUDENT SURVEY

Methods

An on-line survey was developed after conducting a review of the current literature related to outcomes related to indigenous students in post-secondary education institutions, in which much of the indigenous education research literature cited the importance of socio-emotional outcomes when considering post-secondary success, rather than more conventional indicators such as persistence, achievement, and completion. Most prominent among these more culturally grounded, socio-emotional indicators were: sense of belonging, identity formation, and leadership. Owing to a lack of any widely administered survey or questionnaire across the UH system that gathers individual-level information about any of these indicators, the Student Survey was designed to capture these data.

For the sake of expediency, the evaluation team sought out previously validated scales of the three indicators for inclusion in the survey instrument.

Three sources provided the scales needed. To measure identity formation, the Multi-group Ethnic Identity Measure (Phinney, 1992; Phinney & Ong, 2007) was used. The scale consists of six questions that have been used in many contexts, across many different ethnic groups, and in different parts of the world. Small revisions were made to the scale in 2007 in response to feedback from the research community. The revised scale is used in the Student Survey:

I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.

I have a strong sense of belonging to my own ethnic group.

I understand pretty well what my ethnic group membership means to me.

I have often done things that will help me understand my ethnic background better.

I have often talked to other people in order to learn more about my ethnic group.

I feel a strong attachment towards my own ethnic group.

Museus (2014) developed the Culturally Engaging Campus Environments (CECE) instrument to assess sense of belonging on college campuses. The three-question scale has been used considerably across U.S. post-secondary campuses and continues to gain traction abroad. The scale includes the following questions:

I felt like I was part of the community on campus.

I felt like I belonged on campus.

I felt a strong connection to the community on campus.

The National Longitudinal Survey of Freshmen (Massey, Charles, Lundy & Fischer, 2003) consisted of many scales administered to panels of college freshmen over several years. Among these scales were sense of belonging and leadership. The sense of belonging scale included:

I attended extracurricular events on campus.

I discovered friends and interests similar to mine on campus.

I grew more tolerant of other racial and ethnic groups.

I formed new relationships with other racial and ethnic groups.

I made many friends and acquaintances on campus.

I felt safe on campus.

I preferred to spend time with people of my own race/ethnicity.

Factor analyses on the two scales of sense of belonging demonstrated a strong performance for both, so both were used in the survey.

For leadership, two categories arose from the literature: an internal leadership in which a student exhibits strength, courage, and commitment toward their academic journey (“educational agency”; and an external-oriented leadership, in which the student provides assistance not only to peers on campus, but also to family and community (“kuleana,” a Hawaiian word that speaks to one’s privilege and responsibility). Factor analyses of the Student Survey data revealed that several items from the NLSF scales fell into the two factors of educational agency and kuleana, as did some general demographic questions contained in the survey.

The following items constitute the educational agency index:

Sought help from a formal tutor.

Sought academic help from a friend or classmate.

Sought help for your own writing skills.

Sought help for your own reading skills.

Helped another student with their reading skills.

Sought help for your own mathematical skills.

Helped another student with their mathematical skills.

Sought help for your own test-taking skills.

Helped another student with their test-taking skills.

Sought help for your own time-management skills.

Helped another student with their time-management skills.

Sought help for your own understanding of Hawaiian language or culture.

I was afraid of falling out of college.

Similarly, the items associated with kuleana – which derive from both NLSF scales and general demographic questions in the instrument – include:

I was a parent or guardian of at least one child.

I was a caregiver to an elder.

I paid for daycare for a child or elder.

I was managing a medical condition of my own.

I experienced a death in my family or of a close friend.

I was living independently, without financial support from my parents.

I had a full-time job.

I was employed at more than one job at the same time.

I was making rent or mortgage payments.

I wanted to learn the material.

I wanted to keep up with my friends.

I wanted to acquire more skills to help my community.

Raised your hand during a class when you didn't understand something.

Approached a professor after class to ask a question.

Consulted additional materials in the library or online.

Additional questions were added to the survey in order to discern whether a student or alumnus was exposed to any Title III-funded program, activity, or resource. Rather than list specific title for the Title III-funded programs, courses, educational materials, events, facilities, etc., the survey simply describes these items in generic terms. (The concern was that alumnae would have difficulty

remembering the names of specific Title III projects or programs, or confusing them for others funded by the university or other sponsors, years after encountering them on campus.) Responses to these questions were used as proxies for Title III interaction. Title III program involvement included questions concerning participation in: multi-day new student orientations; multi-week campus orientations; a first-semester new student course; a year-long college orientation course; or an assigned peer mentor or tutor. Additional proxies to determine whether students or alumnae benefited from special events included questions related to specific job fairs, speaker series, and cultural events. Further, proxies to determine whether student or alumnae respondents benefited from Title III-funded educational materials or facilities included similar questions that described items and places that are easily identifiable as Title III projects.

A copy of the entire Student Survey can be found in Appendix A

Data from the completed survey were tabulated to discern differences between students or alumnae with Title III proxy involvement and those without. Title III proxy involvement takes three forms: Title III program participation, Title III event attendance, and Title III resource use. These three Title III proxy categories are examined across the four socio-emotional success constructs described above: sense of belonging, identity formation, leadership: educational agency, and leadership: kuleana.

Data

The survey was administered in November 2016 to a roster of students and alumnae who attended any UH campus during the evaluation period (Fall 2008 to Spring 2014) for whom email addresses existed. All Native Hawaiians in this group were included, along with 20 percent of all non-Hawaiians. The survey invitation email message consisted of a description of the project, a link to consent information, and a link to the online survey (hosted on MailChimp).

Although 11 percent of respondents failed to report the primary UH campus they attended, the percentages of 2-year and 4-year campus respondents was nearly identical: 44 percent and 45 percent, respectively.

Of the roughly 1,300 survey responses, only 1,191 contained complete records. Table 2 provides simple demographic characteristics of the respondent pool. Among the age ranges of respondents, those in their 20s were most likely to participate in the survey (34 percent), although nearly one-third of respondents (30 percent) opted to not report age. Similarly, most respondents were female (48 percent), although 29 percent opted to not report gender. Finally, over half of all respondents were Native Hawaiian (57 percent).

Table 2 Demographic characteristics of Student Survey respondents

Student Survey Respondents		
Age Ranges:	40+	20%
	30-39	16%
	20-29	34%
	Below 20	0%
	No Response	30%
Gender:	Male	23%
	Female	48%
	No Response	29%
Ethnicity:	Native Hawaiian	57%
	Caucasian or White	55%
	Chinese	31%
	Japanese	27%
	Filipino	26%
	Other	41%

Findings

Completion, as measured by achievement of a degree, constituted the sole conventional student success outcome fielded in the student survey. Nearly all survey respondents who had participated in Title III programs (98 percent) would eventually earn their desired degree, compared with only 70 percent of those who did not participate in such programs.

In an effort to explore whether Title III-funded activities, programs, and projects may have influenced less conventional outcomes, such as the socio-emotional factors cited above, proxy Title III beneficiaries were tabulated alongside their peers with respect to four factors: sense of belonging; identity formation; educational agency; and, kuleana.

For each outcome, scores were tabulated for each respondent based on their level of agreement or magnitude that they recorded for each statement included in that factor. Each outcome's composite score was then simply categorized based on whether it fell into the top third ("High"), middle third ("Medium"), or bottom third ("Low") of the range of all possible scores for that factor. These categorical outcome variables were then tabulated by the proxy Title III participation variables, which included proxies for Title III program participation, use of Title III-funded resources, and attendance or participation in Title III-funded events.

Table 3 presents the tabulations for the sense of belonging outcome. Proxy Title III program beneficiaries were nearly twice as likely to cite high levels of sense of belonging as their non-Title III peers: 58 percent compared with 31 percent, respectively. Conversely, non-beneficiaries were roughly three times as likely to report low sense of belonging during their times on UH campuses (39 percent and 40 percent, respectively).

Table 3 Sense of belonging among Student Survey respondents, by Title III program status

Sense of belonging			
Title III Programs (proxy)	Low	Medium	High
Total	26.3%	29.5%	44.2%
Beneficiary	13.3%	28.7%	58.0%
Non-beneficiary	39.0%	30.2%	30.8%

Similar trends are found in Table 4 with respect to identity formation during college. Proxy Title III beneficiaries were substantially more inclined to exhibit high levels of identity formation than their peers: 48 percent among Title III program participants compared with 25 percent among non-participants. Moreover, proxy Title III program

Table 4 Identity formation among Student Survey respondents, by Title III program status

Identity formation			
Title III Programs (proxy)	Low	Medium	High
Total	38.1%	25.5%	36.4%
Beneficiary	25.9%	26.5%	47.6%
Non-beneficiary	50.1%	24.5%	25.4%

Table 5 reveals that the percentages of respondents reporting high levels of educational agency are in the single digits. Nonetheless, proxy Title III program beneficiaries are over five times more likely to do so than non-beneficiaries: 5 percent compared with 1 percent, respectively.

Table 5 Educational agency among Student Survey respondents, by Title III program status

Educational agency			
Title III Programs (proxy)	Low	Medium	High
Total	78.2%	18.6%	3.2%
Beneficiary	69.6%	25.0%	5.4%
Non-beneficiary	86.6%	12.4%	1.0%

Finally, Table 6 presents levels of kuleana – sense of responsibility to ‘ohana, community, and ‘āina - experienced by survey respondents during their times on UH campuses. While 8 percent of proxy Title III program beneficiaries exhibit high levels of kuleana, only 5 percent of non-beneficiaries do so. Furthermore, non-beneficiaries are more than twice as likely to report low levels of kuleana compared with proxy beneficiaries (40 percent and 17 percent, respectively).

Table 6 Kuleana among Student Survey respondents, by Title III program status

Kuleana			
Title III Programs (proxy)	Low	Medium	High
Total	28.4%	65.1%	6.5%
Beneficiary	16.5%	75.5%	8.0%
Non-beneficiary	40.0%	54.9%	5.1%

Moreover, survey respondents who indicated having other Title III experiences – e.g., attendance or participation in Title III-funded events or use of Title III-funded resources, both of which were measured in terms of low-, medium-, and high-attendance or use – reported consistently higher levels of sense of belonging, identity formation, and educational agency than other respondents. For the kuleana outcome, high levels of kuleana were roughly equal for medium- and high-attendance (for events) and medium- and high-use (for resources) but substantially higher than among low-attendance/use. Findings for these additional Title III proxies can be found in Appendix C – Student Survey Supplemental Results.

Limitations

The UH system through which the survey was delivered does not have the capacity to provide meta data feedback on email delivery outcomes. Accordingly, there are no metrics to determine how many of the approximately 40,000 email addresses provided remained active, how many of the survey invitation emails were actually opened, or how many recipients clicked through to the MailChimp site to take the survey. For these reasons, results from the student survey should be considered exploratory only, and future research on these subjects among this population should implement better controls for monitoring response rates.

Also, it should be noted that, like most large university systems, the University of Hawai'i system is the recipient of multiple external funding sources. During the period of time under evaluation for this report, various campuses may have offered programs, events, and resources similar to those provided under Title III. Despite efforts to clearly describe the Title III elements for survey respondents, their answers may unknowingly reference services funded by others. (Because each campus may name a Title III-funded activity differently, only generic descriptions could be accommodated in the survey instrument.)

FACULTY & STAFF SURVEY

Methods

After administration of the Student Survey and completion of most of the focus groups and interviews, the evaluation team revised an early draft of the faculty and staff survey to further explore the concept of institutional capacity throughout the system.

The focus of the short online survey consisted of four questions regarding the states of institutional and individual capacity to effectively serve students (in general) and Native Hawaiian students (in particular):

- (1) On a scale ranging from "Very well" to "Very poorly", how would you say UH is doing with respect to its capacity to support overall student success?
- (2) Compared to when you first began working in the UH system, do you feel that UH's capacity is better, worse, or has not changed since then? (Better, No change, Worse)
- (3) On a scale ranging from "Very well" to "Very poorly", how would you say UH is doing with respect to its capacity to support Native Hawaiian student success?
- (4) Compared to when you first began working in the UH system, do you feel that UH's capacity to support Native Hawaiian students is better, worse, or has not changed since then? (Better, No change, Worse)

The same questions are posed again, but this time in reference to the respondent's own capacity.

Additional questions regarding participation in certain types of professional development opportunities are also included.

The data were tabulated upon close of the survey and reported alongside the other data findings.

Data

The data consist of 1,144 anonymous responses from faculty, staff, and administrators within the UH system. Table 7 presents the distribution of respondents by UH campus. Each campus in the UH system is represented in the data, with the system's largest campus, Mānoa, contributing to more than half (54 percent) of all respondents.

The Staff Survey instrument can be found in Appendix D – Staff Survey Instrument.

Table 7 Distribution of Staff Survey respondents' University of Hawai'i campuses

Respondent distribution	
Campus	Pct.
Hawai'i Community College	6.1%
Univ. of Hawai'i - Hilo	9.7%
Honolulu Community College	6.4%
Kapi'olani Community College	8.1%
Kaua'i Community College	2.8%
Leeward Community College	7.9%
Univ. of Hawai'i - Mānoa	53.6%
Maui Comm. College/College	5.9%
Univ. of Hawai'i West O'ahu	8.7%
Windward Community College	5.2%

Note: The sum of the percentages exceeds 100% owing to respondents employed on more than one campus.

Findings

Respondents were asked to assess the UH system's capacity ("institutional capacity") to support student success using a scale ranging from "Very well" to "Very poorly." They were then asked to assess their own capacity to support student success. The same two questions were then posed once again, but focusing specifically on supporting Native Hawaiian student success. Table 8 presents the percentage of positive responses (i.e., "Very well," "Well," and "Somewhat well") for each of these capacity questions.

More than 85 percent of respondents reported that institutional capacity was positively situated with respect to all students (in general) and Native Hawaiian students (in particular). Less than one percentage point separates institutional capacity positive responses for all students from that of Native Hawaiian students (86 percent).

When considering their own capacity to support student success, even higher percentages of positive responses occur: 95 percent for all students and 92 percent for Native Hawaiian students.

Table 8 Staff perceptions of current capacities to support student success

Current capacity to support student success		
Capacity to support...	Positive responses:	
	Institution	Self
All students	86.0%	95.4%
Native Hawaiian students	85.5%	92.2%

Table 9 presents the percentages of respondents who stated that capacity to support student success was better than when they began working in the UH system. At the institutional level, respondents 59 percent of respondents felt that the UH system capacity is better than in the past at supporting student success for all students; however, an even larger number of respondents felt that capacity to support Native Hawaiian student success had improved – 10 percentage points higher than for the general student population.

Table 9 Staff perceptions of changes in capacities to support student success

Changes in capacity over time to support student success		
Capacity to support...	"Better" responses:	
	Institution	Self
All students	59.2%	66.3%
Native Hawaiian students	68.6%	63.7%

Interestingly, only two percentage points separate the percentages of respondents who feel their own capacity had improved over the same period of time: 66 percent for all students and 64 percent for Native Hawaiian students. This finding may be indicative of many factors, including a general hunger for more training or guidance in ways in which Native Hawaiian students can be better supported, or the mere fact that many respondents are actively engaged in supporting Native Hawaiian UH students.

Table 10 presents a cross-tabulation of respondents' perceptions of changes in their capacities to support Native Hawaiian students relative to the Hawaiian-focused professional development activities in which they have engaged during their UH employment. The tabulations suggest that faculty, staff, and administrators who have taken advantage of Hawaiian-focused professional development courses are more likely to report better capacity in supporting Native Hawaiian student success than those who report that their capacity to do so has worsened during their employment.

Table 10 Staff Hawaiian-focused professional development, by perceptions of changes in own capacity to support Native Hawaiian student success

Respondent professional development & perceptions of changes in own capacity			
Examples of Title III-funded professional development	Perceptions of change in own capacity to support Native Hawaiian student success		
	Better	No change	Worse
Olelo Hawai'i (Hawaiian language)	77.3%	18.9%	2.1%
Hawaiian history	75.3%	19.8%	3.0%
Hawaiian cultural practices (e.g., lei making, hula, weaving, voyaging)	74.4%	20.4%	3.5%
Wahi pana (i.e., learning more about the place in which your campus is located)	76.0%	18.5%	3.5%
Mo'oku'ahau (genealogy)	84.9%	11.8%	1.1%
Current Hawaiian issues	74.6%	20.1%	3.7%

Limitations

Like the limitations stated for the student survey, the staff survey suffered from a lack of meta data related to the response rate to the survey invitation to university employees across the UH system. Accordingly, responses provided in this report can only be considered exploratory in nature and should be further investigated in future analyses of this type.

FOCUS GROUPS & INTERVIEWS

In order to better discern the context, content, and goals of the 44 Title III grants in operation during the evaluation period, the evaluation team set out to speak with various groups and individuals on each UH campus. The primary goal of these discussions was to build off the information gleaned from the literature review and document review stages of the evaluation by determining the specific goals of the Title III programming and projects over the 2008-2014 period. By better understanding the goals, one can then measure the anticipated outcomes to determine whether the goals have been met.

METHODS

The evaluation team hosted 11 focus groups, and 26 interviews with a total of 92 individuals. The evaluation team coordinator worked with campus personnel to schedule and arrange logistics for focus groups for students, faculty and staff, and (in some cases) Title III principal investigators. Owing to the high demands on some Title III principal investigators, the evaluation team arranged for individual interviews for them. Individual interviews were conducted –in-person, over the phone, or via video conferencing technology – with campus administrators (i.e., chancellors, vice chancellors of academic affairs, and vice chancellors of student affairs).

The protocols for both the focus groups and interviews are largely similar and can be found in Appendix E – Focus Group and Interview Protocols.

All focus group and interview participants received a Consent document that summarized the overall evaluation, the specific nature of the focus groups and interviews, any benefits or risks to participation, and additional resources in case they required further information. Each participant signed a consent form before the focus group or interview began.

Three members of the evaluation team attended each focus group; two attended each interview. All questions (and prompts) were directed to respondents as written. In the interviews, one evaluation team member assumed the role of note-taker and recorder, while the other administered the questionnaire. For focus groups, one team member was note-taker and recorder, while the other two alternated delivering the questions and monitoring the responses.

DATA

All meetings were transcribed by a note-taker and simultaneously recorded (for reference and review purposes). All transcripts were compiled into a single analytic database which was used for coding purposes and to conduct subsequent content analyses. All respondents' names or initials were stripped from the database to ensure confidentiality.

FINDINGS

As part of the overall goal of the qualitative portion of the evaluation – that is, focus groups and interviews – was the pursuit of greater clarity of the body of Title III grants and their respective

activities. Because some campuses had been engaged in Title III grant awards since their inception, there was considerable context from prior Title III programs and projects that were often significant influencers on the existing listing of Title III activities. Accordingly, interviews with principal investigators and campus administrators included questions regarding the history of Title III in the UH system and how it has evolved over the years. A summary of these findings is found in the Context section below.

All focus groups and interviews contained nearly identical questions regarding student success, strengthening the institution, promising practices, and institutionalization. These questions align with the stated goals of the federal Title III program and were of particular interest owing to the general lack of information about these topics in the annual performance reports. A final question (in both the focus groups and interviews) posed a question regarding participants' wishes for their campus or the UH system if anything were possible. We call this section "Magic Wand."

Context

It was clear from nearly every campus administrator and Title III principal investigator that Title III has greatly contributed to the fabric of every campus in the system. Although many of the campuses have been Title III recipients for over a decade, there has been an evolution in the design and implementation of Title III activities over the past decade.

"Title III has strengthened our institution in multiple ways,...not just our student success, but infrastructure, renovations, technology, faculty development. It has also helped us to leverage other funding."

- Title III Principal Investigator

Both administrators and principal investigators alike affirm that Title III was much needed and has played a role in addressing historical inequities in higher education in Hawai'i. However, the Title III journey was a bumpy one. As a state school of higher education, the UH system is subject to the same budgetary requirements as all other state

actors. Competition for additional funding is a challenge. Accordingly, Title III presented a much welcomed opportunity.

Early grants sought to leverage the allowable activities to invest in campus resources under a commonly held theory that any improvement to a campus will help everyone, including Native Hawaiians. The most often cited version of this theory among focus group and interview informants was, "the rising tide will float all boats." Over time, however, many realized that the theory, however well intentioned, was flawed: an institution founded on Western philosophies of education, information management, and pedagogy that had effectively ignored its host population was not necessarily going to remarkably improve its capacity to educate and grow Native Hawaiian students any better with improved infrastructure and new resources.

"When I got here, the previous [Title III project] team had a Native Hawaiian element, but I don't think it was the focal point. Now the focal point on campus is Native Hawaiian success, an increased in level of priority.."

- Campus administrator

"It's amazing what an institution can do when everyone is moving in the same direction. Title III led this movement of UH coming to the conclusion to support Native Hawaiian student success."

- Campus administrator

One principal investigator, who was cited by nearly every campus as being the greatest source of guidance and communication, noted that it took time to convince other campuses to take a more authentic look at the needs of Native Hawaiian students and work harder to ensure that programs and projects intended for all do not, in fact, fail to

meet the needs of Native Hawaiian students. When questioned whether there were any particular milestone events that signaled a change in the design and implementation of Title III programming, many cited a change in leadership on their own campus. New chancellors appeared more willing to hand over the reins of Title III grants to those most familiar with the strategies and resources that are best suited to Hawaiian culture and philosophies of education. When many of these shifts in leadership occurred, many campuses realized, after several years, that one community college had gone in a different direction that honored Hawaiian culture, sense of place, and the needs of modern young Hawaiians.

Soon, campus Title III grants were implementing new support services that campuses – many found in the education practitioner literature as best practices in higher education – but taking care to implement these services in ways that would honor

"It was [campus] council arguing for language, mission statements - that advocacy fed our institutional mission."

- Title III Principal Investigator

Hawaiian values and focusing on the needs of the students. Title III provided additional weight to the roles of campus councils dedicated to honoring and promoting Hawaiian culture, language, pedagogy, and knowledge. Soon, a system-wide council, Hawai'i Papa o ka Ao, was formed. In collaboration with the UH system's president and others, the University of Hawai'i has adopted strategies and goals to become a Hawaiian place of learning.

This all-too brief accounting of the context in which Title III has evolved over the past 20 years is but a fraction of the rich history of Title III in Hawai'i. However, it is important to understand that, like most institutions, the University of Hawai'i has changed in some significant ways with respect to serving Native Hawaiian students and communities. And Title III has played a role in that change.

Findings from the remaining focus group and interview questions occasionally reference these changes, which warrants this effort at establishing context.

Student Success

The federal Title III program seeks to increase institutions' capacities to support Native Hawaiian student success. To that end, this evaluation seeks to understand how members of the UH community define student success.

Conventional indicators

“As an administrator, success is in the data: persistence, retention... As a teacher, it’s embracing the students love for the course.”
- Faculty/staff

The research and practitioner literature is rife with definitions of student success. In higher education, there is a general agreement that access, persistence, achievement, and completion are desirable outcomes, especially so given that most higher

education campuses are held to benchmarks in these areas. Virtually every focus group and interview cited conventional indicators of student success: for some, the conventional measures were sufficient definitions; for others, they were acknowledged, but not prioritized. Many respondents acknowledged that conventional definitions of student success play a role in oversight of education organizations, while one focus group member wondered whether indicators such as retention and completion were institutional success measures, not student success measures.

For most respondents, conventional indicators of student success were insufficient, especially in the context of Hawai’i. While some felt that Native Hawaiians and non-Hawaiians might prioritize indicators of student success differently, none suggested that Native Hawaiian students and non-Hawaiian students shared no common indicators of success.

Sense of belonging

A sense of belonging was commonly cited by respondents in all areas as a key indicator of student success: a student who is comfortable on campus, has formed relationships with others in the campus community, and who believes that they are where they are supposed to be. Several respondents cited historical barriers that have caused Native Hawaiians to feel unwelcome in higher education in Hawai’i, as well as the harsh stereotypes to which young Native Hawaiians can be subjected on college campuses.

“Knowing that one’s experiences are valued in higher education: ‘My knowledge and experiences and who I am will be valued.’ Valuing students creates a powerful learning environment.”
- Faculty/staff

Respondents identified various measures of sense of belonging among college students. Are they happy? Have they formed relationships on campus with other students, staff, or faculty? Do they make use of the resources available on campus to navigate college life? Do they see themselves on campus? Contributing to these aspects of sense of belonging are the physical spaces of UH campuses. Many observed that one would not necessarily know that they were in Hawai’i when wandering some UH campuses. Others noted that some campuses – in whole or in part – are devoid any Hawaiian language signage or spaces, which can disorient Native Hawaiian students who had hoped to preserve some portion of their heritage while attending college.

“Once they make that contact and they know somebody is here, that is success in their own head that they can do it. And they are going to do it so that they can do whatever they want to do in their life, whether it be going on to a 4-year or going back to their community.”
- Title III Principal Investigator

The sense of belonging can be further reinforced through strong connections between the campus and surrounding communities. Students for whom integrating into the campus culture is difficult may feel greater ease by observing a common cause shared by both campus and community.

Identity formation

Though not as widely cited, many respondents discussed the importance of student success being defined by the students themselves, given that all individuals have their own motivations and aspirations for attending college. It is not uncommon for young people to seek growth and greater knowledge of the world and themselves.

This includes understanding one's own history and culture. While generally focused on Native Hawaiian students, comments were often extended to any student seeking to learn more about their place in the world.

"Not just that I am Hawaiian; I *identify* as a Hawaiian. I see those students coming out and moving up to [university] with that broader sense of self, broader sense of *Hawaiian* self. I think that's the difference from regular student success: they are graduating with more than what they started off with.."

- Faculty/staff

Several individuals mentioned the importance of "success in failure." That with every stumble, there is a lesson learned and wisdom to be gained. To that end, respondents suggested that the initial

"Setting out to do something and you come to the realization that you cannot do it - it is still success because you have learned from that experience. It helps you discover what best suits your strengths. There is success in failure."

- Faculty/staff

attempt to enroll in college is significant. An awareness of one's options and taking the step to pursue one. These examples, which can easily be ascribed to a list of deficits by some, are believed to be positive indicators of growth, maturity, and wisdom, ideals that many seek to pursue in higher education.

Educational agency

In the literature review conducted by the evaluation team, leadership was a prominent theme mentioned among several indigenous education research articles. However, in speaking with the broad cross-section of individuals across the UH system, the

evaluation team learned that leadership in a Native Hawaiian context can cover lots of ground. This qualitative effort revealed that, at a minimum, leadership can be both inwardly focused and outwardly focused. The type of leadership that was identified as more internal is referred to here as educational agency: the ability to direct one's own educational journey, including the obstacles along the way. This builds on the identity formation indicator of student success in that it builds on a sense knowing oneself to forge ahead in pursuit of other growth opportunities, such as continued education. This includes pursuing resources when needed. Taking on roles on campus in order to better access information and support. It can even be the ability to pivot mid-way through college when they discover that they may be on the wrong path. In the words of one respondent, "It can mean after taking 30 credits, they decide to go another direction."

"When students learn that they can succeed. For Native Hawaiian students, it's undoing past stereotypes: that Hawaiian students are stupid, that you should not ask questions, etc.."

- Faculty/staff

Kuleana

Kuleana is the Hawaiian word for responsibility or privilege, and is the term chosen by the evaluation team to represent the outward-facing aspect of leadership that was commonly discussed in both the focus groups and interviews. (One focus group used the term "function" in conjunction

with kuleana to describe this aspect of leadership.) Kuleana is an important value in Hawaiian culture and, therefore, was perhaps the most often cited indicator of student success cited in reference to Native Hawaiian students. It is not a trivial term. With privilege comes responsibility.

“They know their kuleana and how their kuleana affects other processes. They know exactly where they are at and how they got there. They may not know where they’re gonna go, but they know their kuleana in relation to the bigger picture.”

- Faculty/staff

Accordingly, for many Native Hawaiian students, there is implicit agreement that with the knowledge they are acquiring in the higher education domain, there is a responsibility to convey some of that privilege back to one’s community. Or communities, if one has a strong affiliation with more than one place.

Give-back can take the form of physically returning to one’s hometown and using one’s education to contribute meaningfully to the community’s well-being. However, it can also mean physically residing elsewhere while maintaining strong connections and offering continued support to one’s childhood community. In more than one UH campus, the campus is uniquely tied to the community in which it is located. As a result, many students and graduates feel a sense of kuleana to consider that community as well. Many respondents cited kuleana as an additional piece that complements the conventional indicators of student success. The emphasis is making good use of the education one is receiving by translating it into actions that can benefit the community from which one has been nourished and groomed.

“General student success is setting the goal, getting the degree, whereas Native Hawaiian success is integrating with that part of culture where community is valued.”

- Student

To better illustrate the power of kuleana, the following testimonial from the faculty member at one UH campus may provide some insight: “The oldest kupuna (elder) that I had here was 93 years old. She took just one class and she never missed a day. She was the first one there and the last one out. But what happened was, she had such an impact on the other students, that they started to come to class early, and then started to be mindful of her. They didn't know that she would actually clean up the classroom after. So then they started to hang around. It just shows you a seed, how it grows; watching that is also success because it's cultivating something within the students, too. It becomes a community thing.”

Strengthening the Institution

The federal Title III Program explicitly cites the objective of strengthening institutions so that they can better support Native Hawaiian student success. To that end, each focus group and interviewee was asked for examples of ways in which Title III has strengthened the University of Hawai‘i.

Leading the change

Foremost among the examples of ways in which Title III has strengthened the UH system was formation of Hawai‘i Papa o ke Ao, “a presidential appointed work committee tasked with developing, implementing and assessing strategic actions to make the University of Hawai‘i a leader in indigenous education.” The committee, created in 2012, consists of representatives from each

"Hawai'i Papa o ke Ao's role] strengthens the institution because it offers another pedagogy as to how we teach. It gives Hawaiian, or Indigenous knowledge systems, a place in western academia, and I think that's really important for our students to understand.."

- Faculty/staff

campus in the UH system and meets monthly. Hawai'i Papa o ke Ao supplements the work of other Hawaiian-focused councils in the UH system (e.g., Pūko'a Council) and on individual campuses. (For more information about Hawai'i Papa o ke Ao, please visit <https://www.hawaii.edu/hawaiipapaokeao/>.)

Focus group and interview participants cite the value of having a group of Hawaiian leaders who are providing strategic direction and solutions for the entire system as a critical role to further the institutional goal to become a place of Hawaiian learning and a leader in indigenous education. Additionally, the clear lines of communication among all 10 campuses (and their satellite campuses) that are maintained by the committee provide greater opportunities for information sharing and collaboration. Having clear lines of sight to sister campuses provides greater cohesion and opportunities to explore new avenues to better support students, campus faculty and staff, and the communities in which campuses reside.

Hawai'i Papa o ke Ao's efforts to elevate the discussion of indigenous education and give meaning and purpose to the UH system's efforts to support Hawaiian culture, history, and language on its campuses also serves as inspiration for those who have committed themselves to educating and supporting generations of Native Hawaiian students.

"It's amazing what an institution can do when everyone is moving in the same direction. Title III led this movement of UH coming to the conclusion to support Native Hawaiian student success."

- Campus administrator

New focus and strategies

"I think the effort to empower Native Hawaiians to lead the effort and actually focusing on Native Hawaiian student success [has strengthened the campus]. The old approach 'If all students succeed, then Native Hawaiian will succeed.' I don't think that works as well."

- Title III Principal Investigator

As mentioned in the brief context provided above, many respondents feel that the institution has been strengthened through the shift in focus and strategy from "what is good for all students is good for Native Hawaiian student" to "what is good for Native Hawaiian students is good for everyone." Recent studies in Hawai'i have demonstrated that Hawaiian culture-based educational strategies have

contributed to increased socio-emotional and academic outcomes among middle and high school students, both Native Hawaiian and non-Hawaiian alike (see, for example, Kana'iaupuni, Ledward & Malone, 2015). These efforts lend greater urgency to efforts to introduce more Hawaiian approaches to higher education and to the general well-being of college students in the UH system. These efforts extend from the classroom to the gathering places to the administrative offices.

For some campuses, the focus has remained on Native Hawaiian student success. Respondents acknowledge that those campuses serve as

"There's much more focus on following Hawaiian values. You can tell it's okay is when non-Hawaiian faculty don't push back. Before, they didn't understand what was going on. Now they're seeing the success of title III, it has transformed them."

-Title III Principal Investigator

examples of ways in which to adopt new approaches and to introduce more Hawaiian values, more Hawaiian language fluency, and more application of Hawaiian knowledge to campus life.

Reflections of ourselves

Although many respondents expressed hopes for campus environments that were more reflective of Hawai'i and of Native Hawaiian culture, many campuses have advanced efforts to transform their campuses in ways that are inviting to would-be Native Hawaiian students. From mammoth murals that depict images of cultural significance and deep meaning decorating campus buildings to stretches of native plants along walkways to dedicated spots on campuses for regular protocols such as welcoming visitors, campuses have created spaces that connote belonging and inspiration for students on their educational journeys. Through the two-year period during which this evaluation was conducted, the evaluation team has witnessed multiple significant additions to campuses across

"As students kind of spend time there and constantly look at the mural and spend time in [the community], they start to see a lot more of themselves. They can see themselves in the building."

- Faculty/staff

the state that honor Native Hawaiian culture and provide practical and meaningful spaces for students to learn, work, collaborate, or relax. Spaces that reflect the students they serve have prompted admiration among the focus group and interview participants.

Educating the educators

As noted in the Document Review portion of this report, professional development has played a prominent role in much of the Title III programming over the evaluation period. Focus group and interview respondents stated that these efforts have played a significant role in strengthening their campuses in meaningful ways. Hawaiian cultural orientation classes to new employees on one campus prompted much discussion of the impact on both the new faculty and staff who enrolled in the Title III-funded classes as well as the students with whom these employees interacted. Having a greater understanding of the community, the students, and the culture of Hawai'i provided much desired clarity and direction for employees seeking to identify their roles and place on a new campus.

"There has been improvement in number of faculty and administrators who have cultural and language competency. That shows our respect and the importance of Hawaiian culture, language and traditions."

- Campus administrator

Promising Practices

The focus groups and interviews also identified an abundance of promising practices that emerged from Title III activities over the years. The most prominent of these promising practices are presented.

System

At the system level, the creation of Hawai'i Papa o ke Ao was mentioned once again as an effective and much needed addition to the system's leadership team. The practice of engaging Native Hawaiian education leaders from each campus for continued communication made considerable

"Hawai'i Papa o ke Ao sends a message that the UH system is committed to indigenizing the university system, that's a good step in the right direction."

-Faculty/staff

sense to most focus group and interview participants, who expressed appreciation for the decision to form the committee and admiration for the action of the committee thus far. Many expressed greater appreciation for similar campus-

level committees, who they cite as being more empowered to coordinate and advocate for resources and actions that can better support Native Hawaiian student success. The same coordination and delineation of pathways across the UH system that Hawai'i Papa o ke Ao has established is reflected in campus-based committees as well.

That said, respondents also asserted that Title III has also inspired – and in some ways, necessitated – greater collaboration within campuses and between campuses, which is viewed as especially welcome. Earlier years of the Title III grant awards in the UH system included occasional meetings of Title III leaders and staff from all the campuses. When this evaluation project gathered the same groups together for the project launch, many expressed nostalgia for the opportunities to share and learn from each as they had in the past. Similarly, on campuses, the hunger to learn from and share with their sister campuses persists. It is a practice that many wish would continue as the system seeks to increase its efforts to become a leader in indigenous education.

"One of the things that works very, very well and needs to be expanded are the bridging initiatives. These are culturally grounded bridging initiatives that help students not only learn academic skills, but connect folks to people."

-Campus administrator

Campus

At the campus level, three themes rose above the rest: Hawaiian spaces, kauhale models of service delivery, and place-based learning.

The emergence of uniquely Hawaiian spaces on campuses has been met with much admiration, appreciation, and envy. Native Hawaiian student centers, culturally responsive student support centers, and traditional Hawaiian hale (structures) are examples of some of the spaces that incorporate Hawaiian culture and philosophies of community and sharing that prove to be more inviting than Western-styled modern classrooms or lounges. Moreover, the spaces are not reserved

"Creating a Hawaiian space, with Hawaiians. Showing that Hawaiian are important and that it's ok to be Hawaiian."

-Faculty/staff

for Native Hawaiian students only, but welcome all. However, as recognizable Hawaiian-friendly spaces, they promote greater belonging and commitment to the students they serve.

Another improvement on many campuses has concerned renovation projects that created open, easily accessible and centralized offices in a single location – kauhale – that eliminate the confusion among students seeking specific student services offices in a maze of buildings. Several campuses have implemented kauhale to great effect. The clustering of similar services is also credited with improving communication and support across offices and departments.

"The kauhale model (academic village without walls)."

-Faculty/staff

Finally, campuses have dedicated increasingly more time and resources to getting their students *off* campus in order to broaden their learning beyond the classrooms. Cultural place-based learning has

“Culture place-based learning is a no brainer for us, I can't believe it took us this long. Any place-based learning is better especially for this generation.”

- Campus administrator

not only provided greater opportunities for real-world knowledge for students, but also creates greater relationships with the communities in which the campuses reside. Regular *huaka'i* (journeys) were cited among students and staff as especially enlightening experiences.

Students

From the student perspective, respondents felt strongly that efforts to more purposefully engage with students is paying great rewards in terms of sense of belonging, retention, and overall well-being. Whether dedicated, Title III-funded academic counselors to intrusive counseling services to embedded tutors to peer mentors, the knowledge that there are individuals on campus that care about your educational journey and are ready to assist appears to be making an impression on both students and campus staff. According to respondents, engaging students in meaningful ways is critical to success.

“Peer mentoring, embedded tutors, intrusive pairings, study groups... We've created and maintained gathering spaces on campus for students to hang out.”

-Title III Principal Investigator

Focus group and interview participants suggest that engagement can occur in other ways that also produce desirable results. Student employment was often cited as a positive influence on engagement for multiple reasons. By working on campus, students who might otherwise feel alienated while on campus are essentially placed in positions where they must engage with fellow students and other campus employees. The connections created during those engagements can promote a greater sense of belonging on campus and expose students to more resources than would otherwise be available or even known. Further, owing to the financial burdens of higher education, student employment offers some respite in the form of a paycheck and possible tuition assistance. Relief of financial burden can open a student up to pay greater attention to learning. Finally, having an on-campus job is more likely to provide a student with a sympathetic supervisor who is attentive

“As a student worker for a program and working with students and seeing their successes, I was able to apply to myself and improve grades. Rewarding feeling; success of others helped me envision success of myself.”

- Student

to academic “crush” times each semester when studying for exams may take priority over the normal work schedule. Such is not often the case in off-campus employment situations. As a result, student employment was offered as a promising practice toward improving student success.

Institutionalization

Institutionalization proved to be the most sensitive subject throughout the Title III evaluation. It should be noted that, during the focus groups and interviews, respondents were seemingly able to cite more examples of Title III activities that had not been institutionalized than those that had. However, with some probing, respondents were able to unveil not only several examples of institutionalized activities, but also guidance on how to ensure future institutionalization.

Barriers

Several barriers to institutionalization were offered in most of the focus groups and interviews. While students admitted that they have no knowledge of how institutionalization occurs, campus administrators offered reasoned explanations of the ins and outs of pursuing the institutionalization of externally funded programs or activities.

Because the University of Hawai'i is a state system, it is subject to the approval of its budgets by the state legislature, which is a tough hurdle to clear for most. In-between the Title III program and the state legislature, however, are several layers of university and state offices that also have obligations to ensure that any funding proposals are properly vetted and justified. For many of the respondents in the focus groups, the process was a mystery. For them, reason suggested that if a program or activity is demonstrating effectiveness and achieving its intended goals, then it should be adopted into the overall system. For them, the lack of internal funding was surprising.

"There's always some form of institutional barrier."

- Faculty/staff

Campus administrators acknowledged the difficulties in pursuing new positions, and other funding for Title III activities that demonstrated promise. They also expressed appreciation for the

"Positions are so heavily regulated by the state, it's difficult to get them."

- Campus administrator

opportunity to be able to pilot programs and activities by means of the Title III grants in order to learn what might benefit campuses and students achieve their goals. Unfortunately, it is a complicated task.

For staff on the ground – especially those on one campus whose Title III grant ended during the evaluation with no new grant to take its place – the resulting disruption to the lives of students on campus who were making use of and benefiting from Title III-funded services was severe. Staff mentioned how they try to fill the gaps when externally funded services end, having grown accustomed to wearing multiple hats for the sake of the students. It was these stories that seemed to convey the commitment and sense of loss that staff feel when programs are not taken over by the system or campus.

"[The lack of institutionalized programs] disrupts the students."

- Faculty/staff

Successes

With some probing, the evaluation team did uncover many instances of successful Title III programming or activities that were institutionalized during the period under evaluation. Most notably, at the time of this writing, first-year experience programs (in various forms) are prevalent

"Much of First-Year Experience - Frosh Camp, NSO, Learning Communities, and Frosh Cohort - has been institutionalized.."

- Faculty/staff

throughout the system. Most of the first-year experience programs (or their elements) were originally Title III-funded activities that were scaled up and later adopted into the campus.

Another notable example of institutionalization concerns the many renovation projects funded by Title III. For all intents and purposes, the buildings, classrooms, and systems that received renovations became the obligation of the UH system after those renovations were completed. The campuses maintain those facilities, which would technically fall under the auspices of institutionalization (although not entirely in the same spirit as intended).

Pseudo-Institutionalization

Throughout the evaluation team's multiple visits to the campuses across the state, the team could not help but notice various activities occurring that, when questioned, were identified as having their roots in former Title III programs. For example, several campuses have protocols in place such as a welcoming ceremony that the evaluation team received during its first visit to one campus. This Hawaiian protocol had started during an earlier Title III grant cycle and had persisted. When pressed, several campuses were able to identify multiple elements of former Title III funding that had persisted on campus long after the grant had closed. What differentiates these activities from formally institutionalized activities is the fact that they are cost-free. Specifically, they are protocols, behaviors, policies, and procedures that were implemented and caught hold with the campus community, resulting in their continued use. Of course, these actions did not create new jobs or necessarily maintain the level of service to students that had been offered during the original grant, but they do represent a lasting effect of Title III investment that should be noted.

"I think sometimes you can institutionalize with existing resources. Sharing of knowledge. Those things are easy."

-Campus administrator

"No cost [institutionalization]: Hawaiian hale, pre-semester orientations, program with retirees who come throughout semester and greet folks outside Kauhale building, make it feel like an 'ohana and small community."

- Title III Principal Investigator

Other examples of no-cost institutionalization include efforts to share knowledge and resources with other campuses or with neighboring communities. These efforts perpetuate the spirit of the grant activities that created them in meaningful ways that can affect the success of both students

and campus staff equally.

RETROSPECTIVE STUDENT-LEVEL IMPACT ANALYSES

In order to discern the impact of Title III-funded programming that occurred throughout the entire UH system, the evaluation examines two programs: First-Year Experience programs in effect at the system's community colleges during the evaluation period, and community college-to-university transition programs that began at the three UH universities during the evaluation period. These analyses are divided into two parts: one analysis examines outcomes that occurred in UH community colleges during the years in which FYE programs were offered; the other examines outcomes that occurred in UH four-year universities among transfers from the community colleges, who may have been recipients of prior FYE programs and/or community college-to-university transfer programs (TXP).

Both analyses adopt Astin's Input-Environment-Outcome model (1970, 1991, 1993) to organize and conceptualize the factors that may influence each outcome. Astin posits that inputs – those qualities or experiences that a student brings to college – can not only affect the new environment they will experience in college, but also that both inputs and environment can influence college outcomes. In each analysis, however, the Title III program participation variable is called out as the “Intervention,” in order to provide greater focus on the purpose of this evaluation.

Methods (general)

The retrospective student-level analyses examine the de-identified student records of all students who were enrolled in the UH system during the evaluation period. With records that include information on participation in Title III First-Year Experience and/or transition programs, the evaluation team examined differences in Title III program participants and their peers with respect to outcomes associated with persistence, achievement, and completion. Persistence is defined by continued enrollment, achievement is measured by cumulative grade point averages while enrolled, and completion is signaled by the awarding of a credential or, in the case of community college students, transfer to a four-year university.

Analyses consist of Bivariate comparisons and multivariate models for each sample and outcome.

Bivariate comparisons allow one to see differences in general frequencies and means of the outcome variables, based on whether a student participated in a Title III First-Year Experience program. These tables provide a “surface-level view” of how FYE participants compare to their peers. However, unlike multivariate models, they do not take into account other factors that may contribute to the differences seen in the Bivariate tabulations. Nonetheless, observed Bivariate differences between groups are often the spark that ignites further inquiry and can be helpful in forming hypotheses.

Multivariate regression models follow, in which each outcome is modeled for all groups identified. The statistics presented will be those related to the intervention under evaluation here: Title III program participation.

Data (general)

The evaluation requested de-identified individual student records through the UH system's Institutional Research and Analysis Office (IRAO) for all students enrolled during the evaluation period. Data would include general demographic information about the students, as well as enrollment statuses, prior secondary and post-secondary information, home campus, other enrolled campuses, course loads, grade point ratios, student employment, and credentials earned *for each semester during the evaluation period*. An additional data request was made to Hawai'i Data Exchange Partnership to obtain information concerning any labor force activity among students for each semester of UH enrollment. Finally, IRAO confidential merged data on Title III program participation submitted by individual campuses to the de-identified data set that was delivered to the evaluation team.

A total of 142,807 cases constituted the data received. After the evaluation team conducted a thorough examination of all the data elements, an extract was created consisting of only those cases that met the following criteria:

- students who were classified (i.e., enrolled in certificate or degree programs);
- students who were in New, Returning, or Transfer statuses during the period (and therefore potential participants in any First-Year Experience programs); and,
- students who were enrolled on a campus that provided a Title III program during the semester they arrived.

The data set was then reorganized from a calendar year format (e.g., Fall 2008, Spring 2009, Fall 2009) to a standardized semester-count format (e.g., Sem1, Sem2, Sem3). Accordingly, a calendar-indifferent data design allows every student starting their first semester – whether in Fall 2008 or Spring 2012 – to be compared to other students starting their first semesters.

Once the data records were standardized by semester, the original demographic, socio-economic, and academic variables were used to create alternative formats of themselves (e.g., categorical variables spawned binomial “dummy” versions for use in analyses) or new variables altogether. All were examined and considered for the final models applied to the analysis.

To achieve the best possible examination of retrospective data, the evaluation team used propensity score matching techniques to create “statistical twins” for each Title III participant in data set. To do so, a set of descriptive variables that represent characteristics of students *prior* to any intervention (i.e., Title III programs) are arrayed through a series of models in order to produce student-level propensity scores, which were subsequently used to identify and match individuals with similar scores to those of Title III participants. The final paired data set is then the basis for subsequent analyses. For the purposes of the community college FYE analyses, a 1-to-1 matching SAS® macro was applied. In the case of the community college-to-university Title III transition programs, the 1-to-1 matching SAS® macro was applied to match community college transfer students with Title III program participation with other transfer students. Further, models are also run for Native Hawaiian subsets of each file.

COMMUNITY COLLEGE FIRST-YEAR EXPERIENCE PROGRAMS

Methods (Community College FYE)

Bivariate analyses compare Title III FYE participants with their peers on the range of input, environment, and outcome variables in order to discern possible differences and trends.

Multivariate models include input, environment, and intervention variables (a subset of intervention variables) as independent variables, and selected outcomes as the dependent variables. Logistic regression models are applied binomial outcome variables, while generalized linear models are applied to continuous outcome variables.

Data (Community College FYE)

From the master data file, an extract of community college students for whom first-year experience programs were available yielded 84,383 records, which was subsequently whittled down to 17,328 records consisting of matched cases after propensity score matching. The algorithm for creating the matched pairs of community college students can be found in Appendix F – One-to-Many SAS® Macro.

Input variables include demographic characteristics, former high school type, high school GPA,³ and socio-economic status. Table 11 presents descriptive statistics for the FYE analysis Input variables for both the entire community college paired sample and the Native Hawaiian-only subset of that paired sample.

³ Final high school grade point averages (GPA) for many students in the UH data set were missing. (Hawai'i community colleges do not require high school GPA information for enrollment. Given that post-secondary outcomes are the dependent variables in the analyses, the lack of any measure of prior achievement would negate any findings. To remedy the problem, the final GPAs of all Hawai'i public school graduates were mapped to the respective records in the data set.. For those records for whom no corresponding GPA data were available (e.g., private school graduates, out-of-state graduates, etc.), multivariate imputations for the missing GPA values were conducted. The resulting imputed values, along with a flag noting the GPA as imputed, were attached to the remaining records.

Table 11 Descriptive statistics: Community college FYE analysis Input variables

Input Variables			All UH Community College Students		Native Hawaiian UH Comm. College Students	
Variable		Statistic	n = 17,328		n = 3,914	
Label	Type	type	Num.	Pct.	Num.	Pct.
Age	Continuous	mean	21.92		21.35	
Gender:						
Female	Categorical	freq.	9,552	55.1%	2,228	56.9%
Male	Categorical	freq.	7,645	44.1%	1,644	42.0%
Other	Categorical	freq.	130	0.8%	42	1.1%
Native Hawaiian ethnicity	Binomial	freq.	3,914	22.6%	3,914	100.0%
High school type/location:						
Hawai'i public school	Categorical	freq.	9,713	56.1%	2,653	67.8%
Hawai'i private school	Categorical	freq.	1,397	8.1%	660	16.9%
Hawai'i GED	Categorical	freq.	947	5.5%	308	7.9%
Any school outside Hawai'i	Categorical	freq.	5,271	30.4%	293	7.5%
Socio-economic Status:						
No. semesters Pell funding	Continuous	mean	1.30		1.52	
EVER awarded Pell funding	Binomial	freq.	6,580	38.0%	1,960	50.1%
Prior Achievement:						
High school GPA upon graduation	Continuous	mean	2.88		2.69	

Environment variables include enrollment cohort, type, full-/part-time status, and changes. In addition, Environment variables include measures of credit load, student employment, and external labor market activity. Table 12 presents descriptive statistics for both the complete community college paired-sample, as well as the Native Hawaiian-only subset of that sample.

Table 12 Descriptive statistics: Community college FYE analysis Environment variables

Environmental Variables			All Community College Students		Native Hawaiian UH Comm. College Students	
Variable		Statistic type	n = 17,328		n = 3,914	
Label	Type		Num.	Pct.	Num.	Pct.
Enrollment Cohort:						
Pre-AY2008-09	Categorical	freq.	459	2.6%	150	3.8%
AY2008-09	Categorical	freq.	462	2.7%	108	2.8%
AY2009-10	Categorical	freq.	1,536	8.9%	322	8.2%
AY2010-11	Categorical	freq.	1,803	10.4%	389	9.9%
AY2011-12	Categorical	freq.	2,836	16.4%	611	15.6%
AY2012-13	Categorical	freq.	2,699	15.6%	650	16.6%
AY2013-14	Categorical	freq.	2,763	15.9%	601	15.4%
AY2014-15	Categorical	freq.	2,503	14.4%	533	13.6%
AY2015-16	Categorical	freq.	2,267	13.1%	550	14.1%
Enrollment Type:						
New	Categorical	freq.	16,910	97.6%	3,744	95.7%
Returning	Categorical	freq.	128	0.7%	60	1.5%
Transfer	Categorical	freq.	290	1.7%	110	2.8%
Enrollment Status:						
Num. semesters enrolled full-time	Continuous	mean	2.73		2.37	
Num. semesters enrolled part-time	Continuous	mean	1.63		1.56	
EVER enrolled full-time	Binomial	freq.	13,243	76.4%	2,885	73.7%
EVER enrolled part-time	Binomial	freq.	12,078	69.7%	2,753	70.3%
Enrollment Changes:						
Num. completed semesters	Continuous	mean	4.15		3.74	
Num. incomplete semesters	Continuous	mean	0.21		0.18	
Num. sems. in "Returning" statuses	Continuous	mean	0.15		0.17	
Num. sems. in "Transfer" statuses	Continuous	mean	0.26		0.25	
Num. gaps in enrollment	Continuous	mean	0.26		0.28	
Credits Earned:						
Avg. num. credits earned	Continuous	mean	8.43		8.17	
Total credits earned	Continuous	mean	41.03		35.60	
Max. num. of credits earned in sem.	Continuous	mean	11.02		10.60	
Employment - Student (On-campus):						
Num. sems. on-campus employment	Continuous	mean	0.28		0.28	
EVER held on-campus employment	Binomial	freq.	1,594	9.2%	377	9.6%
Employment - Off-campus:						
Num. semesters any work	Continuous	mean	0.58		0.54	
Num. semesters FT work	Continuous	mean	0.57		0.63	
Num. semesters PT work	Continuous	mean	1.68		1.68	
EVER worked (at all)	Binomial	freq.	11,104	64.1%	2,743	70.1%
EVER worked full-time	Binomial	freq.	4,126	23.8%	935	23.9%
EVER worked part-time	Binomial	freq.	9,933	57.3%	2,454	62.7%

Outcome variables fall into three categories: persistence, achievement, and completion. The persistence outcomes examined include: finishing the first year, returning for the next year, finishing the next year, and so on. The achievement outcomes examined include grade point averages for each year attending the community college. The completion outcomes examined include award of a certificate, an associate's degree, or transfer to a four-year university.

In the case of persistence and completion, there are two versions of each outcome: one that discerns whether the event ever happened, regardless of how long it took to occur, and another that discerns whether the event occurred in a timely manner (as often required in educational reporting).

Table 13 presents descriptive statistics of the outcomes for both the community college paired sample and the Native Hawaiian subset of the paired sample.

Table 13 Descriptive statistics: Community college FYE analysis Outcome variables

Outcome Variables			All UH Community College Students		Native Hawaiian UH Comm. College Students	
Variable		Statistic	n = 17,328		n = 3,914	
Label	Type	type	Num.	Pct.	Num.	Pct.
Persistence:						
Completed first year	Binomial	freq.	13,192	76.1%	2,875	73.5%
Returned for second year	Binomial	freq.	10,501	60.6%	2,140	54.7%
Completed second year	Binomial	freq.	8,809	50.8%	1,708	43.6%
Returned for third year	Binomial	freq.	6,974	40.2%	1,325	33.9%
Completed third year	Binomial	freq.	5,020	29.0%	922	23.6%
Returned for fourth year	Binomial	freq.	3,789	21.9%	675	17.2%
Completed fourth year	Binomial	freq.	2,651	15.3%	471	12.0%
Completed first year <i>on-time</i>	Binomial	freq.	11,916	68.8%	2,561	65.4%
Returned for second year <i>on-time</i>	Binomial	freq.	9,313	53.7%	1,864	47.6%
Completed second year <i>on-time</i>	Binomial	freq.	7,903	45.6%	1,491	38.1%
Returned for third year <i>on-time</i>	Binomial	freq.	6,331	36.5%	1,188	30.4%
Completed third year <i>on-time</i>	Binomial	freq.	4,569	26.4%	823	21.0%
Returned for fourth year <i>on-time</i>	Binomial	freq.	3,483	20.1%	612	15.6%
Completed fourth year <i>on-time</i>	Binomial	freq.	647	3.7%	120	3.1%
Academic Achievement:						
Cumulative GPA over first year	Continuous	mean	2.43		2.15	
Cumulative GPA over first two years	Continuous	mean	2.69		2.52	
Cumulative GPA over first three years	Continuous	mean	2.83		2.69	
Cumulative GPA over first four years	Continuous	mean	2.90		2.82	
Completion:						
Earned certificate in 2 yrs	Binomial	freq.	189	1.1%	27	0.7%
Earned certificate in 3 yrs	Binomial	freq.	531	3.1%	77	2.0%
Earned certificate in 4 yrs	Binomial	freq.	739	4.3%	106	2.7%
EVER earned certificate	Binomial	freq.	937	5.4%	136	3.5%
Earned associates in 2 yrs	Binomial	freq.	518	3.0%	69	1.8%
Earned associates in 3 yrs	Binomial	freq.	2,144	12.4%	312	8.0%
Earned associates in 4 yrs	Binomial	freq.	3,248	18.7%	484	12.4%
EVER earned associates degree	Binomial	freq.	4,049	23.4%	621	15.9%
Earned cert/assoc in 2 yrs	Binomial	freq.	662	3.8%	92	2.4%
Earned cert/assoc in 3 yrs	Binomial	freq.	2,399	13.8%	359	9.2%
Earned cert/assoc in 4 yrs	Binomial	freq.	3,509	20.3%	539	13.8%
EVER earned certificate/associates	Binomial	freq.	4,323	24.9%	679	17.3%
Transfer to UH 4-Yr in 2 yrs	Binomial	freq.	327	1.9%	47	1.2%
Transfer to UH 4-Yr in 3 yrs	Binomial	freq.	1,193	6.9%	149	3.8%
Transfer to UH 4-Yr in 4 yrs	Binomial	freq.	1,907	11.0%	275	7.0%
EVER Transferred to 4-yr UH campus	Binomial	freq.	2,246	13.0%	354	9.0%
Any success measure in 2 yrs	Binomial	freq.	931	5.4%	133	3.4%
Any success measure in 3 yrs	Binomial	freq.	3,030	17.5%	437	11.2%
Any success measure in 4 yrs	Binomial	freq.	4,168	24.1%	635	16.2%
EVER achieved any success measure	Binomial	freq.	4,842	27.9%	764	19.5%

Findings

For reference, Table 14 presents Input variable descriptive statistics for both community college FYE participants and their peers. Inputs are characteristics that students possess prior to any intervention under study. One can note that many of the statistics contained in the table vary considerably between the FYE participants and non-participants. This is a result of the propensity score matching, which used many of these variables to discern statistical “twins” among the larger data set.

Table 14 Bivariate statistics: Community college FYE analysis Input variables

All Community College Students					Native Hawaiian Comm. College Students			
Input variables	FYE Participants (n=8,664)		Non-participants (n= 8,664)		FYE Participants (n=1,958)		Non-participants (n=1,956)	
	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.
Age	21.93		21.91		21.37		21.32	
Gender:								
Female	4,778	55.1%	4,774	55.1%	1,112	56.8%	1,116	57.1%
Male	3,820	44.1%	3,825	44.1%	823	42.0%	821	42.0%
Other	66	0.8%	64	0.7%	23	1.2%	19	1.0%
Native Hawaiian ethnicity	1,958	22.6%	1956	22.6%	1,958	100.0%	0	0.0%
High school type/location:								
Hawai'i public school	4,855	56.0%	4,858	56.1%	1,324	67.6%	1,329	67.9%
Hawai'i private school	696	8.0%	701	8.1%	350	17.9%	310	15.8%
Hawai'i GED	484	5.6%	463	5.3%	158	8.1%	150	7.7%
Any school outside Hawai'i	2,629	30.3%	2,642	30.5%	126	6.4%	167	8.5%
Socio-economic Status:								
No. semesters Pell funding	1.35		1.25		1.61		1.42	
EVER awarded Pell funding	3,229	37.3%	3,351	38.7%	981	50.1%	979	50.1%
Prior Achievement:								
High school GPA upon graduation	2.87		2.89		2.70		2.69	

Persistence

Persistence is measured multiple ways, but selected scenarios are presented in Table 15 for both study populations: the general community college student paired sample, and the Native Hawaiian-only subset of that sample. These statistics suggest that FYE participant persistence outcomes are generally 5 percentage points higher than their peers after the first year, whether looking simple milestone achievement (i.e., no time limit) or “on-time” achievement of the milestone. The same holds true for the Native Hawaiian-only subset, but to a greater extent. This snapshot provides support for the hypothesis that Title III programs may promote greater post-secondary success among participants. A more comprehensive multi-variate analysis follows.

Table 15 Bivariate statistics: Community college FYE persistence outcomes, by FYE participation

Outcome variables	Community College Students				Native Hawaiian Comm. College Students			
	FYE Participants (n=8,664)		Non-participants (n= 8,664)		FYE Participants (n=1,958)		Non-participants (n=1,956)	
	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.
Completed first year	6,779	78.2%	6,413	74.0%	1,533	78.3%	1,342	68.6%
Returned for second year	5,552	64.1%	4,949	57.1%	1,207	61.6%	933	47.7%
Completed second year	4,742	54.7%	4,067	46.9%	988	50.5%	720	36.8%
Returned for third year	3,864	44.6%	3,110	35.9%	782	39.9%	543	27.8%
Completed third year	2,741	31.6%	2,279	26.3%	508	25.9%	414	21.2%
Returned for fourth year	2,109	24.3%	1,680	19.4%	383	19.6%	292	14.9%
Completed fourth year	1,462	16.9%	1,189	13.7%	261	13.3%	210	10.7%
Completed first year <i>on-time</i>	6,143	70.9%	5,773	66.6%	1,367	69.8%	1,194	61.0%
Returned for second year <i>on-time</i>	4,933	56.9%	4,380	50.6%	1,052	53.7%	812	41.5%
Completed second year <i>on-time</i>	4,242	49.0%	3,661	42.3%	860	43.9%	631	32.3%
Returned for third year <i>on-time</i>	3,518	40.6%	2,813	32.5%	700	35.8%	488	24.9%
Completed third year <i>on-time</i>	2,505	28.9%	2,064	23.8%	453	23.1%	370	18.9%
Returned for fourth year <i>on-time</i>	1,950	22.5%	1,533	17.7%	345	17.6%	267	13.7%
Completed fourth year <i>on-time</i>	361	4.2%	286	3.3%	66	3.4%	54	2.8%

Table 16 presents the partial statistical output from multivariate logistical regressions modeling various levels and types of persistence. Specifically, each line lays out selected statistics indicating the performance of the intervention variable, Title III FYE program participation, on each definition of persistence.⁴ In the top panel of the table, statistics suggest that after completion of the first year, differences between those who participated in FYE programs were more likely to return and finish subsequent years of community college education. For example, on the “Finished 2nd Year” line, community college FYE participants exhibit 31 percent higher odds of completion than their peers (odds ratio of 1.305). Further, they are 57 percent more likely to return for a 3rd year. The notable exception to the trend is completion of Year 3, at which point Title III participants appear to be disadvantaged relative to their peers. This trend is evident on the Native Hawaiian sub-sample side of the table as well.

In the bottom panel of the table, which focuses on the timeliness of each persistence milestone – i.e., that students are completing contiguous semesters and not taking semesters off – there are appreciable FYE influences in the completion of Year 1 and return at Year 3, but the same drop off in Year 3 completion obtains.

⁴ It is important to note that any inferences made on the outputs from Bivariate and multi-variate analyses take into consideration several factors, and not solely the p-value in regression outputs. In accordance with Wasserstein & Lazar (2016) and the American Statistical Association, multiple statistics contribute to any assertions of variable influence.

Table 16 Multivariate model: Title III FYE participation, by selected persistence outcomes

Persistence Outcomes (Title III FYE output)	All UH community college students					Native Hawaiian UH comm. coll. students				
	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio
<i>On any timeline ("ever")</i>										
Finished 1st year	0.0493	0.0902	0.298	0.5849	1.051	0.3378	0.2050	2.717	0.0993	1.402
Returned for 2nd year	0.0310	0.0892	0.121	0.7285	1.031	0.3564	0.1938	3.382	0.0659	1.428
Finished 2nd year	0.2660	0.1012	6.903	0.0006	1.305	0.5777	0.2211	6.828	0.0090	1.782
Returned for 3rd year	0.4496	0.0790	32.384	<0.0001	1.568	0.2940	0.2135	1.896	0.1685	1.342
Finished 3rd year	-0.5207	0.1095	22.593	<0.0001	0.594	-1.8153	0.2501	52.693	<0.0001	0.163
Returned for 4th year	0.3326	0.0997	11.122	0.0009	1.395	-0.1190	0.3089	0.148	0.7001	0.888
Finished 4th year	-0.0208	0.1433	0.021	0.8848	0.979	-0.9543	0.3967	5.787	0.0161	0.385
<i>In contiguous semesters ("on-time")</i>										
Finished 1st year	0.1621	0.0696	5.426	0.0198	1.176	0.3426	0.1491	5.278	0.0216	1.409
Returned for 2nd year	0.0259	0.0735	0.125	0.7239	1.026	0.3937	0.1595	6.091	0.0136	1.482
Finished 2nd year	0.1431	0.0870	2.705	0.1000	1.154	0.1788	0.1819	0.967	0.3254	1.196
Returned for 3rd year	0.3448	0.0716	23.208	<0.0001	1.412	0.1143	0.1918	0.355	0.5511	1.121
Finished 3rd year	-0.4070	0.1000	16.570	<0.0001	0.666	-1.6251	0.2294	50.204	<0.0001	0.197
Returned for 4th year	0.0947	0.1196	0.627	0.4286	1.099	-0.0278	0.2861	0.010	0.9225	0.973
Finished 4th year	-0.1753	0.1186	2.183	0.1395	0.839	-0.3776	0.3725	1.028	0.3107	0.685

Academic Achievement

Academic achievement is measured across each of the first four years among the community college paired sample and its Native Hawaiian subset. The average cumulative GPA by the end of each year is compared between FYE participants and their peers in Table 17. This snapshot of annual cumulative GPAs shows that FYE participants exhibit slightly lower achievement than their peers.

Table 17 Bivariate statistics: Community college FYE achievement outcomes, by FYE participation

Outcome variables	Community College Students		Native Hawaiian Comm. College Students	
	FYE Participants (n=8,664)	Non-participants (n= 8,664)	FYE Participants (n=1,958)	Non-participants (n=1,956)
Variable	Mean	Mean	Mean	Mean
Cumulative GPA over first year	2.39	2.46	2.14	2.15
Cumulative GPA over first two years	2.66	2.73	2.48	2.58
Cumulative GPA over first three years	2.83	2.83	2.68	2.69
Cumulative GPA over first four years	2.90	2.90	2.82	2.83

Generalized linear regression models of the achievement outcomes, modeled on the input, environment, and intervention variables presented in the descriptive statistics, provide a more realistic view of any influence of FYE participation on GPA. Table 18 presents the statistical output for the Title III FYE participation (intervention) variable in predicting half-point increases in GPA for each year. These findings suggest that first-year cumulative GPA may be influenced by FYE participation: 0.16 of a grade point increase among FYE in the community college paired sample and 0.46 of a grade point increase among FYE in the Native Hawaiian subsample. (Because GPA is measured in half-point increments, interpretations double the estimate to represent movement along

a single grade point.) Any possible influences fade, however, in successive years. The models from which these FYE outputs came report that high levels of explanatory power, but that is due to the very strong performance of prior achievement – both high school and most recent college GPAs – as predictors of annual GPA.

Table 18 Multivariate model: Title III FYE participation, by selected achievement outcomes

Achievement Outcomes (Title III FYE output)	All UH community college students				Native Hawaiian UH comm. coll. students			
	Est.	Std.Err.	t Value	Pr> t	Estimate	StdErr	t Value	Pr> t
1st year cumulative GPA ¹	0.0821	0.0484	1.70	0.09	0.2338	0.0997	2.34	0.02
2nd year cumulative GPA ¹	-0.0470	0.0283	-1.66	0.10	-0.0464	0.0636	-0.73	0.47
3rd year cumulative GPA ¹	-0.0157	0.0276	-0.57	0.57	-0.0659	0.0688	-0.96	0.34
4th year cumulative GPA ¹	0.0269	0.0335	0.80	0.42	-0.0564	0.0916	-0.62	0.54

College Completion

Community college completion was operationalized in many ways, including certificate completion, associate's degree award, any two-year degree award, transfer to a UH four-year university, and any combination of those already cited. Table 19 provides a cross-sectional look at three of these completion outcomes. Other than completion within two years, FYE participants generally outperform their peers in both samples (general and Native Hawaiian).

Table 19 Bivariate statistics: Community college FYE completion outcomes, by FYE participation

Outcome variables	Community College Students				Native Hawaiian Comm. College Students			
	FYE Participants (n=8,664)		Non-participants (n= 8,664)		FYE Participants (n=1,958)		Non-participants (n=1,956)	
	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.
Earned associates in 2 yrs	194	2.2%	324	3.7%	25	1.3%	44	2.2%
Earned associates in 3 yrs	1,060	12.2%	1,084	12.5%	162	8.3%	150	7.7%
Earned associates in 4 yrs	1,719	19.8%	1,529	17.6%	273	13.9%	211	10.8%
EVER earned associates degree	2,161	24.9%	1,888	21.8%	350	17.9%	271	13.9%
Transfer to UH 4-Yr in 2 yrs	163	1.9%	164	1.9%	27	1.4%	20	1.0%
Transfer to UH 4-Yr in 3 yrs	695	8.0%	498	5.7%	87	4.4%	62	3.2%
Transfer to UH 4-Yr in 4 yrs	1,122	13.0%	785	9.1%	162	8.3%	113	5.8%
EVER Transferred to 4-yr UH campus	1,318	15.2%	928	10.7%	211	10.8%	143	7.3%
Any success measure in 2 yrs	400	4.6%	531	6.1%	58	3.0%	75	3.8%
Any success measure in 3 yrs	1,581	18.2%	1,449	16.7%	231	11.8%	206	10.5%
Any success measure in 4 yrs	2,241	25.9%	1,927	22.2%	359	18.3%	276	14.1%
EVER achieved any success measure	2,619	30.2%	2,223	25.7%	432	22.1%	332	17.0%

Although the Bivariate statistics lend support for a hypothesis of FYE influence in positive completion outcomes, the multivariate models can provide greater insight. In Table 20, the top panel provides model output for the FYE variable in predicting the completion of an associate's degree across various timelines. These data show that, in the general community college paired sample, FYE participants are 48 percent less likely to finish an AA in two years than their peers. However, they are 35 percent more likely to earn their associate's by Year 4 than their peers. In fact, each Year 4 in the left panel suggests a FYE influence on completion or transfer. The same holds true in the right panel, the Native Hawaiian community college student subsample, but also reveals

positive influences of FYE participation in Year 3 completion outcomes: nearly twice the odds (odds ratio of 1.940) of completion of an associate's degree than their peers.

Table 20 Multivariate model: Title III FYE participation, by selected completion outcomes

Completion Outcomes	All UH community college students					Native Hawaiian UH comm. college students				
	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio
<i>Associate's degree</i>										
Ever	-0.1304	0.0815	2.560	0.1096	0.878	-0.2874	0.1955	2.160	0.142	0.750
Within 2 years	-0.6485	0.1437	20.360	<0.0001	0.523	-0.1395	0.3821	0.133	0.715	0.870
Within 3 years	-0.0027	0.0947	0.001	0.9769	0.997	0.6628	0.2546	6.779	0.009	1.940
Within 4 years	0.3011	0.0884	11.592	0.0007	1.351	1.0924	0.2551	18.341	<0.0001	2.982
<i>Transfer to UH 4-year inst.</i>										
Ever	0.0969	0.0931	1.083	0.2979	1.102	-0.0163	0.2257	0.005	0.942	0.984
Within 2 years	-0.1295	0.1725	0.564	0.4528	0.879	-0.0219	0.4548	0.002	0.962	0.978
Within 3 years	0.1679	0.1141	2.166	0.1411	1.183	0.6234	0.3342	3.479	0.062	1.865
Within 4 years	0.4894	0.1033	22.451	<0.0001	1.631	1.2910	0.3255	15.731	<0.0001	3.636
<i>Any success milestone (credential or transfer)</i>										
Ever	-0.0896	0.0825	1.180	0.2773	0.914	-0.2253	0.1939	1.351	0.245	0.798
Within 2 years	-0.3789	0.1137	11.099	0.0009	0.685	-0.0856	0.2974	0.083	0.774	0.918
Within 3 years	0.0363	0.0881	0.169	0.6809	1.037	0.5774	0.2296	6.323	0.012	1.781
Within 4 years	0.2862	0.0879	10.608	0.0011	1.331	1.3258	0.2476	28.661	<0.0001	3.765

COMMUNITY COLLEGE-TO-4 YEAR (CC-TO-4YR) TITLE III PROGRAMS

Methods (CC-to-4yr. Title III)

Analyses for the university-based portion of the evaluation take a similar approach to that of those at the community college level.

The persistence outcomes examined for this group include finishing the third year, returning for the fourth year, finishing the fourth year, and so on. Because community college students can transfer after accruing the requisite number of credits, not all transfer students transfer at the same time. In order to better standardize the persistence across a group with differing starting points and credit loads, the CC-to-4yr. persistence outcomes are also measured in the achievement of full-time equivalent (FTE) yearly milestones. For example, completion of the FTE Year 2 is marked when a student has accrued 48 credits. Both time-based and credit-based persistence outcomes are examined for this evaluation.

Achievement outcomes consist of grade point averages for each year attending the university. Like the standardization of persistence milestones via full-time equivalents, cumulative GPA are also analyzed at FTE milestones.

The completion outcomes examined include award of a bachelor's degree. As in the community college FYE analyses, two sets of completion results are provided: one set discerns whether the milestone ever happened, regardless of how long it took to occur, while the other measures whether the milestone occurred in a timely manner.

Data (CC-to-4yr. Title III)

For university-level Title III analyses, the data are limited to UH students enrolled at the Mānoa, Hilo, and West O‘ahu campuses. The data are divided into four groups of interest:

- all UH university students who have completed 24 credits (full-time equivalent of one year), whether continuing students, transfers, or returning students
- all Native Hawaiian UH university students who have completed 24 credits, whether continuing students, transfers, or returning students
- all UH university students who transferred from UH community colleges
- all Native Hawaiian university students who transferred from UH community colleges

From the 126,948 records of those who enrolled at UH universities, a matched-pairs subset of 2,864 students served as the basis for the CC-to-4yrs. Title III analyses. A Native Hawaiian subsample was also created of the dataset.

The Input variables are identical to those used in the community college-level analyses. Table 21 presents descriptive statistics for the UH community college-to-four-year transfer student sample and its Native Hawaiian subset.

Table 21 Descriptive statistics: CC-to-4yr Title III analysis Input variables

Input Variables			All UH CC-to-4yr. Transfer Students		Native Hawaiian UH CC-to-4yr. Transfer Students	
Variable		Statistic	n = 2,864		n = 701	
Label	Type	type	Num.	Pct.	Num.	Pct.
INPUT VARIABLES						
Age	Continuous	mean	22.95		24.19	
Gender:						
Female	Categorical	freq.	1,590	55.5%	439	62.6%
Male	Categorical	freq.	1,263	44.1%	260	37.1%
Other	Categorical	freq.	11	0.4%	2	0.3%
Native Hawaiian ethnicity	Binomial	freq.	701	24.5%	701	100.0%
High school type/location:						
Hawai'i public school	Categorical	freq.	1,730	60.4%	430	61.3%
Hawai'i private school	Categorical	freq.	343	12.0%	184	26.2%
Hawai'i GED	Categorical	freq.	121	4.2%	45	6.4%
Any school outside Hawai'i	Categorical	freq.	670	23.4%	42	6.0%
Socio-economic Status:						
No. semesters Pell funding	Continuous	mean	3.23		4.32	
EVER awarded Pell funding	Binomial	freq.	1,491	52.1%	463	66.0%
Prior Achievement:						
High school GPA upon graduation	Continuous	mean	3.01		2.90	

Table 22 presents descriptive statistics for the CC-to-4yr. transfer student sample environment variables, as well as for the Native Hawaiian subset of the transfer student sample.

Table 22 Descriptive statistics: CC-to-4yr Title III analysis Environment variables

Environmental Variables			All UH CC-to-4yr. Transfer Students		Native Hawaiian UH CC-to-4yr. Transfer Students	
Variable		Statistic	n = 2,864		n = 701	
Label	Type	type	Num.	Pct.	Num.	Pct.
Enrollment Cohort:						
Pre-AY2008-09	Categorical	freq.	172	6.0%	79	11.3%
AY2008-09	Categorical	freq.	106	3.7%	35	5.0%
AY2009-10	Categorical	freq.	204	7.1%	58	8.3%
AY2010-11	Categorical	freq.	283	9.9%	55	7.8%
AY2011-12	Categorical	freq.	563	19.7%	122	17.4%
AY2012-13	Categorical	freq.	562	19.6%	129	18.4%
AY2013-14	Categorical	freq.	503	17.6%	134	19.1%
AY2014-15	Categorical	freq.	343	12.0%	65	9.3%
AY2015-16	Categorical	freq.	128	4.5%	24	3.4%
Enrollment Type:						
New	Categorical	freq.	-	0.0%	-	0.0%
Transfer	Categorical	freq.	2,864	100.0%	701	100.0%
Enrollment Status:						
Num. semesters enrolled full-time	Continuous	mean	6.93		7.17	
Num. semesters enrolled part-time	Continuous	mean	1.65		1.73	
EVER enrolled full-time	Binomial	freq.	2,837	99.1%	697	99.4%
EVER enrolled part-time	Binomial	freq.	1,785	62.3%	438	62.5%
Enrollment Changes:						
Num. completed semesters	Continuous	mean	8.46		8.78	
Num. incomplete semesters	Continuous	mean	0.12		0.13	
Num. sems. in "Returning" statuses	Continuous	mean	0.14		0.22	
Num. sems. in "Transfer" statuses	Continuous	mean	1.32		1.33	
Num. gaps in enrollment	Continuous	mean	0.32		0.44	
Credits Earned:						
Avg. num. credits earned	Continuous	mean	10.38		10.29	
Total credits earned	Continuous	mean	99.68		102.05	
Max. num. credits earned in sem.	Continuous	mean	15.52		15.30	
Employment - Student (On-campus):						
Num. sems. on-campus employment	Continuous	mean	1.11		1.58	
EVER held on-campus employment	Binomial	freq.	864	30.2%	271	38.7%
Employment - Off-campus:						
Num. semesters any work	Continuous	mean	4.32		4.35	
Num. semesters FT work	Continuous	mean	1.01		0.99	
Num. semesters PT work	Continuous	mean	3.31		3.37	
EVER worked (at all)	Binomial	freq.	2,175	75.9%	564	80.5%
EVER worked full-time	Binomial	freq.	904	31.6%	229	32.7%
EVER worked part-time	Binomial	freq.	2,097	73.2%	545	77.7%

Finally, Table 23 presents descriptive statistics for the CC-to-4yr. transfer student sample outcome variables, as well as the Native Hawaiian subset of that sample.

Table 23 Descriptive statistics: CC-to-4yr Title III analysis Outcome variables

Outcome Variables			All UH CC-to-4yr. Transfer Students		Native Hawaiian UH CC-to-4yr. Transfer Students	
Variable		Statistic	n = 2,864		n = 701	
Label	Type	type	Num.	Pct.	Num.	Pct.
Persistence: Time-based (any timeline)						
Completed third year	Binomial	freq.	2,500	87.3%	626	89.3%
Returned for fourth year	Binomial	freq.	2,289	79.9%	577	82.3%
Completed fourth year	Binomial	freq.	1,811	63.2%	474	67.6%
Returned for fifth year	Binomial	freq.	1,457	50.9%	394	56.2%
Completed fifth year	Binomial	freq.	950	33.2%	264	37.7%
Returned for sixth year	Binomial	freq.	598	20.9%	182	26.0%
Completed sixth year	Binomial	freq.	277	9.7%	89	12.7%
Persistence: Time-based (consecutive sems.)						
Completed third year <i>on-time</i>	Binomial	freq.	2,372	82.8%	588	83.9%
Returned for fourth year <i>on-time</i>	Binomial	freq.	2,172	75.8%	550	78.5%
Completed fourth year <i>on-time</i>	Binomial	freq.	1,713	59.8%	443	63.2%
Returned for fifth year <i>on-time</i>	Binomial	freq.	1,390	48.5%	370	52.8%
Completed fifth year <i>on-time</i>	Binomial	freq.	914	31.9%	253	36.1%
Returned for sixth year <i>on-time</i>	Binomial	freq.	571	19.9%	171	24.4%
Completed sixth year <i>on-time</i>	Binomial	freq.	267	9.3%	85	12.1%
Persistence: Credit-based						
Completed 48 credits (FTE second year)	Binomial	freq.	2,829	98.8%	693	98.9%
Completed 72 credits (FTE third year)	Binomial	freq.	2,757	96.3%	678	96.7%
Completed 96 credits (FTE fourth year)	Binomial	freq.	2,597	90.7%	638	91.0%
Completed 120 credits (FTE fifth year)	Binomial	freq.	2,345	81.9%	578	82.5%
Academic Achievement: Time-based						
Cumulative GPA over first three years	Continuous	mean	3.02		2.98	
Cumulative GPA over first four years	Continuous	mean	3.03		2.98	
Cumulative GPA over first five years	Continuous	mean	3.01		3.02	
Cumulative GPA over first six years	Continuous	mean	2.93		2.96	
Academic Achievement: Credit-based						
Cum. GPA first two FTE yrs. (48 credits)	Continuous	mean	3.05		2.99	
Cum. GPA first three FTE yrs. (72 credits)	Continuous	mean	3.06		3.00	
Cum. GPA first four FTE yrs. (96 credits)	Continuous	mean	3.08		3.02	
Cum. GPA first five FTE yrs. (120 credits)	Continuous	mean	3.09		3.05	
Completion (any timeline)						
Earned bachelors in 4 yrs	Binomial	freq.	1,208	42.2%	245	35.0%
Earned bachelors in 5 yrs	Binomial	freq.	1,223	42.7%	252	35.9%
Earned bachelors in 6 yrs	Binomial	freq.	1,223	42.7%	252	35.9%
EVER earned bachelors	Binomial	freq.	1,223	42.7%	252	35.9%

Findings

As in the community college analyses, bivariate statistics are presented for each of the outcomes variables. These tables are followed by multivariate regression model output for the UH community college transfer student sample and the Native Hawaiian subset. The only model statistics presented here concern the intervention variable of prior Title III program participation in community college or participation in a Title III-funded community college-to-4-year university transition program.

Persistence

The bivariate statistics presented in Table 24 are separated into three sections: the uppermost section examines completion of successive years, as well as return to the university for the following year – regardless of any gaps in enrollment. Individuals who completed a degree program are removed from the models for time periods following the award. Among the Title III participants (“FYP/TXP Participants” in the column heading), the percentages persisting are consistently higher than those of their peers – by over 10 percentage points at one point. The same imbalance persists in the center section of the table for the timely completion (“consecutive semesters”) persistence variables, as well as in the bottom section for full-time equivalent metrics of persistence, whether for the full transfer student paired sample or the Native Hawaiian subset.

These cross-tabulations serve as justification for pursuing multivariate analyses that can consider other factors that may be influencing higher levels of persistence among Title III participants.

Table 24 Bivariate statistics: CC-to-4yr persistence outcomes, by Title III participation

Persistence outcome variables	All UH CC-to-4yr. Transfer Students				Native Hawaiian UH CC-to-4yr. Transfer Students			
	FYE/TXP Participants n = 1419		Non-participants n = 1445		FYE/TXP Participants n = 322		Non-participants n = 379	
	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.
Persistence: Time-based (any timeline)								
Completed third year	1,291	91.0%	1,209	83.7%	298	92.5%	328	86.5%
Returned for fourth year	1,205	84.9%	1,084	75.0%	284	88.2%	293	77.3%
Completed fourth year	957	67.4%	854	59.1%	241	74.8%	233	61.5%
Returned for fifth year	794	56.0%	663	45.9%	206	64.0%	188	49.6%
Completed fifth year	518	36.5%	432	29.9%	145	45.0%	119	31.4%
Returned for sixth year	330	23.3%	268	18.5%	105	32.6%	77	20.3%
Completed sixth year	139	9.8%	138	9.6%	49	15.2%	40	10.6%
Persistence: Time-based (consecutive semesters)								
Completed third year <i>on-time</i>	1,233	86.9%	1,139	78.8%	279	86.6%	309	81.5%
Returned for fourth year <i>on-time</i>	1,145	80.7%	1,027	71.1%	267	82.9%	283	74.7%
Completed fourth year <i>on-time</i>	924	65.1%	789	54.6%	229	71.1%	214	56.5%
Returned for fifth year <i>on-time</i>	767	54.1%	623	43.1%	196	60.9%	174	45.9%
Completed fifth year <i>on-time</i>	499	35.2%	415	28.7%	141	43.8%	112	29.6%
Returned for sixth year <i>on-time</i>	318	22.4%	253	17.5%	100	31.1%	71	18.7%
Completed sixth year <i>on-time</i>	135	9.5%	132	9.1%	47	14.6%	38	10.0%
Persistence: Credit-based (consecutive semesters)								
Completed 48 credits (FTE second year)	1,415	99.7%	1,414	97.9%	322	100.0%	371	97.9%
Completed 72 credits (FTE third year)	1,403	98.9%	1,354	93.7%	319	99.1%	359	94.7%
Completed 96 credits (FTE fourth year)	1,353	95.3%	1,244	86.1%	306	95.0%	332	87.6%
Completed 120 credits (FTE fifth year)	1,258	88.7%	1,087	75.2%	285	88.5%	293	77.3%

Table 25 presents logistic regression output data on the intervention variable, prior Title III program participation, for each measure of time-based persistence. Despite the generally higher levels of persistence evident among Title III participants in the bivariate tabulations above, the models suggest possible Title III influence among the CC-to-4yr transfer students paired sample occurs in Years 4 and 5, in which Title III program participants have 49 percent greater odds of completing the fourth year on-time and 36 percent higher odds of returning for the fifth year on-time compared to their peers. For time-based persistence, the model output (not presented here) suggests that high school GPA and average course load in post-secondary are the dominant drivers of persistence for these samples.

Table 25 Multivariate model: Title III participation, by time-based persistence outcomes

Persistence Outcomes (Time-based)	All UH CC-to-4yr. Transfer Students					Native Hawaiian UH CC-to-4yr. Transfer Students				
	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio
<i>On any timeline ("ever")</i>										
Finished 3rd year	0.3748	0.2663	1.980	0.1594	1.455	0.4842	0.7083	0.467	0.4942	1.623
Returned for 4th year	0.2627	0.1921	1.871	0.1714	1.300	0.9379	0.4955	3.583	0.0584	2.555
Finished 4th year	0.1613	0.1725	0.875	0.3496	1.175	0.0676	0.4003	0.029	0.8658	1.07
Returned for 5th year	0.2506	0.1394	3.232	0.0722	1.285	0.2170	0.3093	0.492	0.4829	1.242
Finished 5th year	-0.0444	0.1647	0.073	0.7873	0.957	0.1552	0.3647	0.181	0.6704	1.168
Returned for 6th year	-0.0641	0.1557	0.169	0.6808	0.938	-0.0530	0.3338	0.025	0.8737	0.948
Finished 6th year	-0.2433	0.2338	1.084	0.2979	0.784	-0.3198	0.4930	0.421	0.5166	0.726
<i>In contiguous semesters ("on-time")</i>										
Finished 3rd year	0.2050	0.1668	1.512	0.2189	1.228	0.0498	0.3447	0.021	0.8851	1.051
Returned for 4th year	0.1119	0.1446	0.599	0.4389	1.118	0.1456	0.3257	0.200	0.6548	1.157
Finished 4th year	0.3990	0.1451	7.565	0.0060	1.490	0.3855	0.2980	1.673	0.1958	1.47
Returned for 5th year	0.3104	0.1280	5.879	0.0153	1.364	0.2450	0.2716	0.814	0.3670	1.278
Finished 5th year	-0.0484	0.1563	0.096	0.7568	0.953	0.3099	0.3386	0.838	0.3600	1.363
Returned for 6th year	0.0013	0.1522	0.000	0.9932	1.001	0.2402	0.3177	0.571	0.4497	1.271
Finished 6th year	-0.1410	0.2254	0.392	0.5314	0.868	-0.1317	0.4671	0.080	0.7780	0.877

Output from alternate models of persistence, as measured in more standardized terms by modeling persistence to full-time equivalent (FTE) year markers measured by credits earned, is presented in Table 26.

Title III participation does not show evidence of playing an influential role in the persistence to the FTE Year 2 milestone, there is evidence that suggests that it may contribute to persistence in later years. Title III participants are over six times the odds (odds ratio of 6.690) of reaching 72 credits (FTE Year 3) than their peers, nearly twice the odds (odds ratio of 1.972) of reaching 96 credits (FTE Year 4), and 253 percent higher odds (odds ratio of 2.525) of reaching 120 credits (FTE Year 5).

Unfortunately, the credit-based persistence models failed for the Native Hawaiian subset owing to multiple separate of points errors and a lack of reasonable model elements.

Table 26 Multivariate model: Title III participation, by credit-based persistence outcomes

Persistence Outcomes (Credit-based)	All UH CC-to-4yr. Transfer Students					Native Hawaiian UH CC-to-4yr. Transfer Students				
	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio
Finished 48 credits (FTE Yr. 2)	0.1727	0.9135	0.036	0.8500	1.189	--- model fails to converge ---				
Finished 72 credits (FTE Yr. 3)	1.9006	0.8181	5.397	0.0202	6.690	--- model fails to converge ---				
Finished 96 credits (FTE Yr. 4)	0.6792	0.3667	3.430	0.0640	1.972	-0.0398	0.8237	0.002	0.9614	0.961
Finished 120 credits (FTE Yr. 5)	0.9264	0.3433	7.283	0.0070	2.525	-0.1450	0.9098	0.025	0.8734	0.865

Academic Achievement

Like persistence, academic achievement is operationalized in two ways: by time-based milestones and FTE credit-based milestones. Table 27 presents bivariate descriptive statistics for both sets of achievement outcomes. The time-based mean cumulative GPAs are nearly identical for Title III participants and their peers, however, in the FTE milestone achievement panel, Title III participants display slightly higher GPAs.

Table 27 Bivariate statistics: CC-to-4yr achievement outcomes, by Title III participation

Achievement outcome variables	UH CC-to-4yr. Transfer Students		Native Hawaiian UH CC-to-4yr. Transfer Students	
	FYE/TXP Participants n = 1419	Non-participants n = 1445	FYE/TXP Participants n = 322	Non-participants n = 379
	Mean	Mean	Mean	Mean
Academic Achievement: Time-based				
Cumulative GPA over first three years	3.02	3.02	3.00	2.96
Cumulative GPA over first four years	3.03	3.02	3.00	2.96
Cumulative GPA over first five years	3.00	3.03	3.02	3.02
Cumulative GPA over first six years	2.91	2.94	3.01	2.90
Academic Achievement: Credit-based				
Cum. GPA first two FTE years (48 credits)	3.07	3.03	3.02	2.96
Cum. GPA first three FTE years (72 credits)	3.07	3.04	3.03	2.98
Cum. GPA first four FTE years (96 credits)	3.08	3.07	3.04	3.00
Cum. GPA first five FTE years (120 credits)	3.10	3.09	3.07	3.03

In the multivariate models, however, Title III participation appears to show some influence in the Year 4 cumulative GPA – a 1/10 of a point increase – but in no other instance, whether time-based or FTE credit-based. The Native Hawaiian subset displays no influence of Title III participation either.

A review of the full model results suggests that achievement is primarily driven by most recent post-secondary GPA and high school GPA, as was noted among the community college FYE analyses.

Table 28 Multivariate model: Title III participation, by selected achievement outcomes

Achievement Outcomes	UH CC-to-4yr. Transfer Students				Native Hawaiian UH CC-to- 4yr. Transfers			
	Est.	Std.Err.	t Value	Pr> t	Estimate	StdErr	t Value	Pr> t
Time-based (semesters)								
3rd year cumulative GPA	-0.0179	0.0203	-0.880	0.379	-0.0379	0.0443	-0.850	0.393
4th year cumulative GPA	0.0509	0.0189	2.700	0.007	0.0333	0.0388	0.860	0.391
5th year cumulative GPA	-0.0223	0.0239	-0.930	0.352	-0.0307	0.0466	-0.660	0.511
6th year cumulative GPA	-0.0185	0.0421	-0.440	0.661	0.0945	0.0801	1.180	0.242
Credit-based (FTE equivalents)								
FTE Year 2 cumulative GPA	-0.0075	0.0114	-0.660	0.512	0.0083	0.0240	0.350	0.729
FTE Year 3 cumulative GPA	-0.0037	0.0114	-0.330	0.744	0.0153	0.0241	0.630	0.527
FTE Year 4 cumulative GPA	-0.0036	0.0115	-0.310	0.755	0.0123	0.0242	0.510	0.613
FTE Year 5 cumulative GPA	-0.0052	0.0122	-0.430	0.667	0.0236	0.0257	0.920	0.358

College Completion

Completion at the university level is limited to the award of a bachelor's degree. The bivariate statistics displayed in Table 29 show the percentages of both groups – CC-to-4yr transfer students and Native Hawaiian CC-to-4yr transfer students – achieving a bachelor's degree in selected time frames. For this sample, no additional students in each group earned a bachelor's after the fifth year. However, the percentages are substantially higher among Title III participants than their peers.

Table 29 Bivariate statistics: CC-to-4yr completion outcomes, by Title III participation

Completion outcome variables	UH CC-to-4yr. Transfer Students				Native Hawaiian UH CC-to-4yr. Transfer Students			
	FYE/TXP Participants n = 1419		Non-participants n = 1445		FYE/TXP Participants n = 322		Non-participants n = 379	
	Num.	Pct.	Num.	Pct.	Num.	Pct.	Num.	Pct.
Completion:								
Earned bachelors in 4 yrs	650	45.8%	573	39.7%	133	41.3%	119	31.4%
Earned bachelors in 5 yrs	645	45.5%	563	39.0%	129	40.1%	116	30.6%
Earned bachelors in 6 yrs	650	45.8%	573	39.7%	133	41.3%	119	31.4%
EVER earned bachelors	650	45.8%	573	39.7%	133	41.3%	119	31.4%

Table 30 presents the output from the multivariate models for the Title III participation intervention variable. The results suggest that Title III participation may influence acquisition of bachelor's degrees among CC-to-4yr transfer students: nearly 50 percent higher odds (odds ratio of 1.488) in Year 4 to 90 percent higher odds (odds ratio of 1.901) by Year 6.

Table 30 Multivariate model: Title III participation, by selected completion outcomes

Completion Outcomes	UH CC-to-4yr. Transfer Students					Native Hawaiian UH CC-to-4yr. Transfers				
	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio	Est.	Std.Err.	Chi-Sq.	P>ChiSq	Odds Ratio
<i>Bachelors degree</i>										
Ever	0.2349	0.0941	6.239	0.0125	1.265	0.2182	0.1952	1.249	0.2638	1.244
Within 4 years	0.3973	0.1084	13.437	0.0002	1.488	0.3586	0.2232	2.580	0.1082	1.431
Within 5 years	0.4019	0.1241	10.495	0.0012	1.495	0.4290	0.2558	2.812	0.0936	1.536
Within 6 years	0.6423	0.1540	17.409	<.0001	1.901	0.7843	0.3137	6.252	0.0124	2.191

RESULTS & DISCUSSION

INTRODUCTION

The results and discussion items are greatly informed by the many threads of information and data that arose – by request or naturally – throughout the term of the evaluation project. Title III is a recognizable and well regarded source of institutional support in Hawai‘i. Much has been accomplished in the years before, during, and after the evaluation period covered by this project – far too much to contain in a single volume – but will likely pale in comparison to the many activities, projects, programs, and other efforts that will continue to move the University of Hawai‘i toward achieving its goal of becoming a true Hawaiian place of learning.

The multiple-methods approach adopted in the evaluation not only provided validation and clarity to assumptions and claims in prior studies, but also provided much needed context to observations and findings that arose throughout the project. The evidence presented in response to each of the original evaluation questions below comes in many forms: observations from campus visits and Title III document reviews; findings from exploratory surveys of UH students and employees; volumes of qualitative data gleaned from focus groups and interviews with individuals on all campuses; and, higher-level quantitative data produced from matched-pairs analyses of multiple outcomes across both community college and 4-year campus contexts.

INSTITUTIONAL CAPACITY

In what ways, and to what extent, have Title III efforts over the last 10 years across the University of Hawai‘i System strengthened the capacity of the campuses to serve and strengthen Native Hawaiian student success?

The constant refrain during the many visits conducted by the evaluation team when discussing the Title III evaluation project was that Title III provides funding to institutions of higher learning that serve Native Hawaiians in order to increase institutional capacity to better support student success. Many would agree that the sentence sums up the program very nicely, but few could offer clear examples of what institutional capacity looks like, what forms it takes, or what one sees when it has occurred.

Throughout the course of the project, many places, spaces, activities, and experiences that the evaluation team initially took for granted could eventually be linked back to a former Title III grant activity. By most accounts, institutional capacity has increased substantially and substantively over the past two decades, although many would cite that there remains considerably more ground to cover. In general terms, both survey and qualitative data support this claim: respondents overwhelmingly cited observed increases the capacities of their campuses and the UH system to support Native Hawaiian student success. Moreover, those respondents who were employed by UH cited increases in their own capacities, as well: those who took advantage of Title III-funded Hawaiian-focused learning opportunities were overwhelmingly more likely to report increased levels of capacity relative their peers who did not take part in such offerings.

Renovations

As noted in the documentation review, renovation funds and activities occupied fully one-third of the budget over the six-year evaluation period: roughly \$20 million for a sizable number of technological upgrades, laboratory refittings, redesigns and renovations, and repairs to aging buildings. Although such repairs and improvements are generally seen as regular housekeeping, the ripple effects of many of the renovation grant projects have been palpable. Renovation projects opened doors to new programming, increased connections among campus members, and inspired changes in the ways in which “business as usual” was conducted. These spaces served as meeting places for professional development opportunities for new instructors, seeking to learn more about Hawai‘i, Hawaiian culture, and the people of their new community. Other spaces provided safe spaces for students, treasured artifacts, tools and equipment that support greater acquisition of knowledge and wisdom.

Professional Development

The adoption of a Hawaiian worldview on many campuses has promoted greater interest in sharing Hawaiian language, culture, and customs with both others on campus and the communities in which they reside. Professional development activities funded by Title III have oriented new staff, faculty, and students to entirely new perspectives of their campuses. They have taken students and staff into the neighboring communities to introduce them to the people of that place, its history, and the things that make that community special. They have provided introductions to the Hawaiian language and proper protocols for occasions that may routinely occur on campus. As one focus group participant noted: “You can tell it’s okay when non-Hawaiian faculty don’t push back.”

Professional development has also strengthened institutional capacity by way of trainings on new technology and systems upgrades that permit campuses to innovate and better document measures of success and improvement. Student workers, staff, faculty, and administrators have been beneficiaries in a wide range of professional development opportunities that have helped to increase their capacities to support Native Hawaiian student success. These claims were frequent and urgent throughout the focus group and interview data, and were recognizable in the site visits made by the evaluation team.

Innovation & Opportunity

The nature of Title III grants is amenable to proposing a concept – e.g., a new type of student service that provides life skills training to all incoming freshmen – then piloting that project on one’s own campus. The opportunity to innovate and test novel ways in which to improve the chances for incoming students is a critical contribution to the UH system. Title III has spurred many duvh innovations and out-of-the-box thinking across all campuses. Many, if not most, of those ideas have resulted in changes to existing services, new policies or procedures, and greater awareness and enlightenment on campuses.

Title III has also provided considerable opportunities, most notably in the form of introducing Hawaiian epistemologies, culture, language, and customs onto UH campuses and into UH classrooms and curricula. Allowing Hawaiian knowledge and culture to inform the ways in which students are engaged, taught, and supported should not be a novel idea, but has shown to have had

tremendous impact on entire campus communities. Students see themselves reflected in the faces of Native Hawaiian educators or visiting practitioners, in the spaces in which they gather, and in the subjects for which they are passionate. Student focus group data suggest that the efforts have resulted in not only greater passion for learning, but also in deep connections to the campus and the community.

Additionally, the limited-lifespan of Title III programs and projects has spurred acuity and nimbleness across the UH system. Campus leaders have benefited from the sharing of successful activities and collaborations with sister campuses. Grant coordinators have leveraged their experience on Title III grants to assist with pursuing other funding opportunities. And, in so doing, have become adept at data gathering in order to justify continued funding for demonstrably successful activities. Dedicated data analysts on some campuses have served as examples of how program/project monitoring and data can inform daily operations and strategic planning.

Campus Consciousness

Na ka Hawai'i, no ka Hawai'i... By nearly all accounts, palpable shifts in energy and momentum occurred when Title III grants were managed by trusted leaders who possessed understanding of their students, their communities, and Hawai'i. Adopting more holistic approaches drawn from Hawaiian cultural practices has elevated campus cohesion across much of the UH system. Many campuses include protocols as part of their normal operating procedures. Some promote visits from kupuna (elders) and esteemed Hawaiian practitioners to inform the learning conducted in the classrooms. The result is a sea change in consciousness for many campuses, in which the identity of the campus is more deeply rooted in its community. According to grant documents and individual and focus group testimonials that connection extends throughout the campus to create greater cohesion and sense of belonging.

These four items – renovations, professional development, innovation and opportunity, and campus consciousness – are the most prominent pieces of evidence that arose during the course of the evaluation. They were not only the most frequently cited, but also those to which the greatest impacts were most often attributed.

PROMISING PRACTICES

What promising and best practices have been realized by Title III efforts?

Nearly every set of analytic data and findings from this evaluation points to the importance of leadership when seeking to design, implement, and coordinate efforts to support Native Hawaiian student success. At the system level, the creation of the Hawai'i Papa o ke Ao committee, with representation from each campus, to promote efforts to lead the UH system to a position as recognized place of indigenous education excellence, and ensuring continuous communication and coordination among campuses and with UH system leadership has made an indelible impression across the UH system. Simultaneously, changes in leadership at individual campuses exposed missed opportunities in past Title III efforts that were quickly remedied, leading to a host of outcomes that have changed campus cultures for the better. The results are found in the annual performance reports, which show shifts in focus from generic campus improvements to focused services and projects that will benefit all while ensuring that Native Hawaiian students are receiving the supports

they need. The qualitative data strongly affirm that Hawai'i Papa o ke Ao and new campus and Title III leadership has been a powerful influence throughout the UH system.

Staffing reports from the UH system's research offices show large increases in the number of Native Hawaiian employees on UH campuses. This trend has not gone unnoticed by most of those who participated in the focus groups and interviews. The qualitative data reveal that students are more likely to feel greater sense of belonging on campus when they see faces at the front of the classroom that resemble their own. In addition to the people, students respond strongly to spaces on campus that are clearly tied to the 'āina (land) and community in which the campus resides. The growth in the numbers of Hawaiian faces and spaces has resonated not only with students, but has been welcomed by all levels of faculty and staff according to the data from focus groups and interviews. Non-Hawaiian students and members of the campus community also express gratitude for the increased representation of Hawaiian culture and Native Hawaiians on campuses.

Revolutionized ways in which to provide student services has also resonated with many throughout the UH system. The renovations that created kauhale formats in which students can easily locate, access, and feel comfortable in spaces dedicated to assisting them on any concerns they may have regarding their enrollment on campus have eased fears among many students and provided greater opportunities for communication and collaboration across formerly isolated offices on campus. Further, innovations in student services – i.e., embedded tutors, peer mentoring, intrusive counseling, and summer bridge courses – have met with much appreciation and acclaim. The knowledge that someone in authority cares whether one is showing up for class has a strong effect on those students who have encountered obstacles and otherwise felt that they were on their own. Student testimonials during the focus groups also revealed that for non-traditional students, these services were critical to ensuring achievement of their educational goals.

For faculty and staff, professional development opportunities dedicated to orienting individuals at all levels to Hawaiian language, practices, history, and philosophies has been enormously popular. Not only are new staff provided much desired orientations to the campus, for many, these experiences serve as their first introduction to Hawai'i. The professional development opportunities have been elective on most of the campuses that have provided them, but several respondents in the focus groups and interviews proposed making them mandatory given the response they have received from earlier iterations.

Student workers are also beneficiaries of the Hawaiian-focused professional development opportunities on some campuses. However, the benefits of student employment go beyond professional development. Based on qualitative data from both current and former students, on-campus employment provides a greater sense of belonging on campus, greater financial security, and greater autonomy over work/school balance (owing to sympathetic supervisors), all of which are theorized to contribute to greater student success.

KEY VARIABLES

What are the key variables associated with Native Hawaiian student success?

Community college context

Persistence. Multivariate models show that student employment and participation in first-year experience programs are among the strongest factors correlated with persistence in community college. Qualitative data strongly suggest that student support services that adopt more active communication and outreach are also contributors to student persistence at this level.

Achievement. Multivariate models suggest that prior academic achievement is the dominating correlate for achievement in community college, whether measured by GPA or credits earned. Qualitative data posit that summer bridge courses, especially those in developmental mathematics, contribute to improved achievement. Similarly actively engaged student services such as embedded tutors and student support centers also contribute to achievement gains.

Completion. Whether operationalizing completion in terms of credentials received or transfer to a four-year campus, multivariate models find that community college completion is largely influenced by prior achievement and participation in first-year experience programs. Qualitative data suggest that active student support services such as peer mentoring, intrusive counseling, and student support centers are also contributing factors to completion.

4-Year campus context

Persistence. Multivariate models suggest that persistence on 4-year UH campuses is largely attributable to prior academic achievement (whether GPA or credits earned). Participation in Title III programming – first-year experience while in community college or the community-college to university bridge program upon transfer to the four-year campus – exhibits correlation to persistence beyond the fourth year (or its equivalent) in the four-year campus context.

Achievement. Similar to findings from the community college context, achievement in the multivariate models is largely influenced by prior achievement, both in high school and during earlier semesters in college. Qualitative data suggest that student support centers on four-year campuses do, in fact, contribute to improved achievement, especially among Native Hawaiian students, based on student testimonials.

Completion. Factors influencing completion in the four-year context (i.e., award of a bachelor's degree) in the multivariate models are age and Title III program participation. For Native Hawaiian students, the Title III effect does not occur until beyond four years (whether measured in time or credits). Qualitative findings also attribute completion outcomes to improved student services on campuses, especially those that promote greater access to support services.

Any campus context

Sense of belonging. Factors most associated with increased sense of belonging on campus include campus renovations that created culturally responsive spaces for students to gather and access resources. Summer bridge and orientation programs were also commonly cited as conduits to gaining greater comfort and establishing relationships on campus. Perhaps most importantly for Native Hawaiian students were opportunities to see Native Hawaiians and Hawaiian culture present on a campus.

Identity formation. Campus orientations that include wahi pana (history of places) and acknowledgement of the ‘āina and local communities where the campus is situated are cited in the qualitative data as significant contributors to students’ efforts to learn more about their place in the broader world. The educational materials and library resources – in some cases, dedicated collections and staff – also serve to provide the information that students seek as they progress on their journeys of self-discovery and growth.

Educational agency. The impact of the kauhale and student support services introduced largely through Title III projects has played a significant role in empowering students to seek out and receive assistance when needed. Services such as peer mentoring and intrusive counseling help to engage students who would otherwise “fall through the cracks.”

Kuleana. Campus efforts to engage families, community members, and other campuses, while also staying engaged in current issues that affect lives in Hawai‘i and beyond have educated and inspired students to understand and pursue their kuleana as members of the UH community. Activities such as wahi pana, huaka’i, and place-based learning provide contexts in which students can learn, experience, and engage in matters of importance to them and consider ways in which they, as eventual college graduates, can contribute to those efforts.

These findings are borne of the quantitative, qualitative, and exploratory survey analyses throughout the evaluation that generated considerable evidence of significant impact of Title III programs and projects on student success throughout the UH system. However, owing to the sparse quantity and specificity of Title III participation data, these findings should be considered conservative with respect to the influence of Title III on both conventional and unconventional measures of student success. That is, more detail of individual elements of each Title III program is likely to discern more sizable effects than provided in this report.

INSTITUTIONALIZATION

In what ways, and to what extent, have the UH System campuses institutionalized programs, services and positions piloted by Title III funding?

On the face, it seems as if the majority of Title III projects and programs have failed to achieve institutionalization. However, upon closer inspection, the area in which institutionalization is most vexing is that of employment: Title III staff who were hired temporarily for (and funded through) the Title III grants are, more often than not, not converted to formal UH positions upon the closing of the grant. If those individuals occupy critical positions, then the services they provided must be taken on by another employee or be dropped. Fortunately, many Title III hires are agile and able individuals who can take on many roles, which avails them to new opportunities when new Title III grants are awarded. In fact, current Title III staff shared their stories of shifting duties during transitions in external grants. While many would prefer to become permanent hires, some were clear in their preference for the freedom of being a temporary hire dedicated to a specific set of duties. This is not to minimize the concerns of esteemed staff who have witnessed great outcomes from Title III activities, only to see them evaporate after five years; only to acknowledge the complexity of employment in a state university system.

Some examples of institutionalization in the UH system follow. The following programs such as first-year experience and support services such as kauhale, intrusive counseling, and peer mentoring have been integrated into many campuses offerings.

Renovations

By default, all Title III-funded renovations have been institutionalized. When the renovations are completed (or the grant closes), campuses are then responsible for the maintenance of the renovated rooms, buildings, dormitories, or other structures. This responsibility is not trivial, as utilities and local government compliance can be daunting. (As an example, several campuses learned that their traditional, open-air Hawaiian hale [buildings] would be subject ordinances requiring fire sprinklers.) Nonetheless, the classrooms, laboratories, studios, student centers, lounges, hula mounds, and other gathering places are all maintained through campus funds once Title III ends.

Curricula & Materials

Considerable effort has been made across the entire UH system, owing to Title III funding, to revised existing curricula to better reflect Hawai'i and engage the people of Hawai'i in the subject matter. Further, Title III has funded the creation of new curricula and degree programs. All of these projects, like renovations, are then maintained and perpetuated under the UH system and its campuses. Similarly, the many educational materials and collections that were acquired owing to Title III funding opportunities now have permanent homes in the classrooms, student centers, libraries, and offices of UH campuses.

Professional Development

Several professional development activities developed under Title III grants, many of which involved introduction and orientation to Hawai'i and Hawaiian culture, were adopted by campuses after receiving popular reviews from those who benefitted from the experiences. These experiences extended to include huaka'i (trips) to places of importance around the campuses, as well as exposure to and learning from local practitioners of and experts in Hawaiian customs, history, and knowledge. On some campuses, kupuna (elder) involvement in campus events, which may have begun via Title III projects, persists to this day.

Policies, Procedures, and Practices

Like professional development activities that persisted beyond the term of the grants that created them, many other behaviors adopted during Title III programs and projects have clearly lived on in the campus community. The evaluation team noted several instances in which a protocol or ceremony occurred and, upon inquiring about its importance to the campus community, the evaluation team would learn that it was borne of an earlier Title III program. Other instances of note: the hanging of a flag at one campus; the adoption of specific procedures or practices when managing an external grant; and, creation of a committee to review new program proposals for cultural sensitivity. These 'no-cost' adoptions of prior Title III programs and projects represent an element of institutionalization that can go largely unnoticed, but that is worthy of note.

First-year Experience (FYE)

Perhaps the largest and most influential example of institutionalization – at least during the period under evaluation – is the first-year experience programs that emerged on the community college campuses (including Maui College). These Title III-funded programs varied by campus, but all adopted common elements cited in the literature that have shown promise in supporting student success. On many UH campuses, the FYE program was piloted, then scaled up, and eventually adopted by the campus and, in some cases, delivered to all incoming students. Although the specific elements of the FYE programs vary across campuses, all have demonstrated great promise. As more data become available, campuses will be able to more rigorously examine the contributions of each FYE program element toward selected measures of student success.

RECOMMENDATIONS

What are the recommendations for Title III programmatic activities to ensure rigorous and successful projects?

Assessing Impact

After nearly 20 years of Title III grant activities across UH campuses, observations, document reviews, exploratory surveys, focus groups, interviews, and exhaustive quantitative analyses of student academic files show clear and significant positive influences of Title III activities on multiple student outcomes and areas of institutional capacity.

Implications

Based on these findings, there may be opportunities to continue to explore ways in which the information can contribute to further advances toward strengthening capacity to support Native Hawaiian student success.

Recommendations

- Campuses might consider partnering to scale-up successful programs/program elements to other campuses.
- Campuses may consider leveraging findings to develop proposals to the state or other external funders to continue existing programs and projects beyond Title III grant closing dates.
- The UH System might consider taking a coordination role in scale-up of programs/program elements that have demonstrated influence on positive outcomes.
- ED might shift the focus of annual performance reporting less on outputs and more on (reasonable) outcomes that can demonstrate the effectiveness of the Title III Program.

Data & Information

The temporary nature of Title III led to the loss of data for some campuses: institutional memory, electronic data files, and hard-copy documentation. Tracking down documents for past grants proved daunting owing to the absence of the temporary staff who maintained the original files and a lack of archiving on campuses. Dedicated tracking exists on only some campuses. Unfortunately for this evaluation, a lack of detailed data on the frequency, duration and magnitude of Title III engagements with students prevented any determination of what specific elements of any program may have most influenced student success.

Implications

Any effort to monitor short- and long-term outcomes from Title III efforts are unfeasible without detailed data. Consequently the findings of this study should be considered conservative regarding Title III influences on student outcomes.

Recommendations

- Campuses might consider developing monitoring and data-collection plans upon award notice.
- The UH System might consider standardization of data systems, data-collection tools, and success indicators to facilitate reporting and to leverage for future funding opportunities.
- The UH system might consider providing coordination and information management to campuses for all external grant programs. Presently, award notifications go to one office, award performance reports go to the principal investigators, and any program data generally stay with the program.
- The UH system might consider developing more rigorous methods for tracking student use of resources, attendance at sponsored events, and enrollment in programs, as well as centralized support for the managers of those data on individual campuses. On many UH campuses, students must sign in on a dedicated laptop to enter a student services facility, which is more cumbersome than simply swiping an ID card.
- ED might consider providing a broader array of outcome-based metrics for students, staff, and campuses in lieu of output-based tallies and checklists. Providing guidance on program monitoring and data management would not only assist in evaluations, but would also increase capacity among Title III grant awardees.

Implementation

Grant documents, survey responses and focus groups have noted that many campuses experience delays in start-up upon award of Title III grant owing to lack of effective administrative support in areas such as finance, human resources, and capital projects.

Implications

If campuses cannot hire on needed staff, manage external funds, and hire contractors to complete the requirements of their Title III award, then they are already at a disadvantage when the grant opens. These delays result in opportunities lost and less potential for reaching the goals of the program or project. Institutional bureaucracies can tie up funds, hiring processes, and requests for proposals from much needed contractors. Such operational delays on one grant can place the current grant and future grants in jeopardy.

Recommendations

- Campuses might consider creating a clearinghouse of detailed information and tips for overcoming various operational obstacles so that others will have more information with which to launch their grants on-time.
- The UH system might consider ensuring all new grantees are aware of system resources for support. A review of the grant proposal might provoke some pre-emptory discussions of particular procedures that will require more time than the grant writers anticipated. The system could work to create guidelines for hiring, contracting, and grant funds management.
- The UH system might consider establishing an external grants coordination office to assist heavily burdened (and often temporary) campus staffs manage activities, reporting, monitoring, professional development activities, and communications.
- ED might consider providing greater lead times on grant awards to allow for much needed time to submit requisitions for staff, equipment, and other supports in order to ensure a “hit the ground running” start to each grant.

Sustainability

All renovations are institutionalized, but many Title III activities fail to persist. Rebranding a program is not permitted. A retooled program can prolong certain activities, but doing so causes other innovations in programming or project to be deferred, creating significant opportunity costs for campuses.

Implications

While Title III provides an innovation incubation of sorts for grantees, the lack of clear guidelines for monitoring and reporting program effectiveness and related success measures prevents any substantive approach to submit viable and reliable proposals for institutionalization for Title III programs or projects.

Recommendations

- Campuses might consider developing more aggressive transition plans for each grant activity.
- Campuses might consider having clear metrics to track from the start of the grant to substantiate requests for continued funding, whether from the state or other external funders.

- The UH system might consider offering support for transitioning grant programs/projects to institutionalized status: orientation to Title III staff of the institutionalization progress at UH; proposal development; and, compilation of evidence of effectiveness.
- ED might consider incorporating sustainability planning within each grant.
- ED might consider reformatting Title III to mirror other ED grant programs (e.g., Investing in Innovation) by offering three separate grant opportunities: development, implementation, and scale-up grants, each dependent on the one that preceded it. Development grants would allow for more dedicated efforts for Title III program/project implementation, which can in turn serve as evidence of effectiveness and eligibility for a final scale-up grant. The scale-up grant can be ramped such that Title III funding diminishes as state or other external funding increasingly takes over funding for the project.

CONCLUDING REMARKS

The evaluation of the University of Hawai'i Title III grant awards for the period 2008 to 2014 has uncovered considerable evidence of both substantive positive benefits to students, staff, faculties, and communities engaged in the UH system and a wealth of operational and implementation information that can inform and possibly re-imagine future grant opportunities that can contribute to the institution's vision of a Hawaiian place of learning. During the course of the study, the evaluation team bore witness to the coming together of Title III leaders from each campus (after a lengthy hiatus of such information-sharing gatherings); the painful end of Title III activities on one of first campuses to implement Title III programming in innovative and culturally salient ways; the telling of personal journeys from former Title III students, now Title III staff and campus leaders; and the burgeoning of more cooperative grants across the UH system.

The evidence gathered for this review and evaluation spanned from campus to system levels, was provided by brand new staffers and those who had retired and moved back to their home communities, required careful listening to heartfelt experiences and methodical exploration and examination of vast data fields; drew upon unique experiences and expertise of member of the evaluation team; and, ultimately presented a story of pushing the status quo and achieving a better vision, through reason, dogged determination, and the will of a body of leaders of a monumental institution that seeks to be better.

The data clearly show a sizable and much valued set of program, projects, resources, services, and systems that have been improved or acquired by means of the Title III Program funding. Periodic performance reports cite the outputs, but it is the personal and professional accounts of students, staff/faculty, principal investigators, and campus administrators that reveal the value of each grant activity pursued on each campus. These accounts are validated by an exhaustive set of analyses of the data over an 8-year period that find that first-year experience programs not only positively influence persistence and completion in community colleges, but also likely contribute those same outcomes when community college students transfer to the system's four-year campuses. More importantly, the interview and focus group participants overwhelmingly state that it is the sense of

belonging, the investment they receive in the form of community integration and knowledge of the culture and history of that community that frees them to succeed in the goals of their own choosing.

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APPENDICES

APPENDIX A - UNIVERSITY OF HAWAI'I TITLE III PROGRAM LIST

Title	Sponsor Award Number	Dates		
		Award	Start	End
Hawai'i CC				
Strengthening Hawaiian Studies Access and Academic Quality	P031W040001	6/17/2008	10/1/2008	9/30/2009
Ha'akumalae	P031W080003	7/15/2008	10/1/2008	9/30/2009
Kulukuluua: 5-year Development Grant	P031W100003	10/5/2010	10/1/2010	9/30/2011
Halaulani	P031W100006	10/5/2010	10/1/2010	9/30/2011
Waihonua: 2 Year Renovation Grant	P031W100008	10/18/2010	10/1/2010	9/30/2011
Honolulu CC				
Re-Imagining Native Hawaiian Student Services: A renovation project to bring our Native Hawaiian Center to the heart of campus through collaboration and co-location with student services	P031V140005	10/2/2014	10/1/2014	9/30/2015
Title III: Kupu Ka Wai-Native Hawaiian Serving Institute	P031W060002	6/17/2008	10/1/2008	9/30/2009
Title III: ANNH Grant Supplemental Funding (Technology Innovation) - MELE	P031W070002	10/12/2007	10/1/2007	9/30/2008
Kapiolani CC				
Strengthening Kapiolani's Campus and Culture for Student Success: Kauhale Ke Kuleana, the Responsibility of the Whole Village	P031V140011	9/30/2014	10/1/2014	9/30/2015
Creating Purposeful and Sustainable Pathways in Student Services, Professional Development, and 21st Century Career Programs for Improved Student...	P031W040002	6/17/2008	10/1/2008	9/30/2009
Renovations for Student Success in Developmental, Digital Media/STEM, and Business Education	P031W080004	7/15/2008	10/1/2008	9/30/2009
Title III Renovation: Strengthening a Cultural Ecology of Learning and Teaching for Student Success	P031W090003	7/30/2009	10/1/2009	9/30/2010
Title III, Strengthening a New Ecology of Engaged Teaching and Learning for student Success	P031W090004	7/21/2009	10/1/2009	9/30/2010
Renovation of STEM Center	P031W060004	10/1/2006	10/1/2006	8/31/2008
Renovation of Holomua Developmental Center for Native Hawaiian and Other Under-prepared Students	P031W070003	10/1/2007	10/1/2007	11/30/2008
Kaua'i CC				
Crossing Cultures	P031V140010	9/26/2014	10/1/2014	9/30/2015
Improving Student Success, Transition and Retention	P031W050008	6/17/2008	10/1/2008	9/30/2009
Title III: Native Hawaiian-Serving Institutions, Higher Education Institutional Aid	P031W120003	9/13/2012	10/1/2012	9/30/2013
Leeward CC				
Pa'a Ke Kahua: Strengthening Our Foundation (Title III Part F 2014-19)	P031V140002	9/26/2014	10/1/2014	9/30/2015
Improving Engagement and Retention Among Underprepared Students	P031W070005	6/17/2008	10/1/2008	9/30/2009
"Ka Ni' o" (Title III 2012-14): Helping Native Hawaiian Students Achieve Academic & Cultural Excellence	P031W120002	9/11/2012	10/1/2012	9/30/2013
E 'Auamo Kakou: A Shared Commitment to Improving Student Outcomes (Title III Part A FY14-19)	P031W140001	9/12/2014	10/1/2014	9/30/2015

Title	Sponsor Award Number	Dates		
		Award	Start	End
UH Hilo				
YR 3 Native Hawaiian Serving Institution '08	P031W050002	8/1/2007	10/1/2007	9/30/2008
Center for Pacific Islander Education/Retention	P031W080006	6/30/2008	10/1/2008	9/30/2009
Native Hawaiian Student Center - Renovation	P031W090002	7/15/2009	10/1/2009	9/30/2010
Hanakahi Student Success Programs	P031W100009	9/29/2010	10/1/2010	9/30/2011
Hookahua: Creating a Strong Foundation for Student Success	P031W120008	9/6/2012	10/1/2012	9/30/2014
Hale Kanilehua Renovation	P031W100005-11			
UH Mānoa				
Renovation proposal to strengthen UHM curricular/co-curricular capacity to foster Native Hawaiian student success in support of building a Hawaiian place of learning (UHM Hawaiinuikea Renovation)	P031V140006	9/30/2014	10/1/2014	9/30/2015
Kokua a Puni - Native Hawaiian Student Service Program	P031W070001	6/17/2008	10/1/2008	9/30/2009
Eia Mānoa: Promoting Native Hawaiian Student Success by Building a Hawaiian Place of Learning	P031W140002	9/23/2014	10/1/2014	9/30/2015
UH Maui College				
Strengthening Maui Community College's Hawaiian Studies Program, Increasing Student Persistence and Graduation, and Developing an Associate Degree...	P031W050005	6/18/2008	10/1/2008	9/30/2009
Native Hawaiian Serving Institution: Increase Native Hawaiian Success at UH Maui College	P031W100010	10/11/2010	10/1/2010	9/30/2011
UH West O'ahu				
UH West Oahu PIKO: Po o, Ike, Kino, and Ohana Project	P031V140004	9/25/2014	10/1/2014	9/30/2015
Creating a Mobile High-Touch, High-Tech Learning Environment: A Program to Promote Academic & Psychosocial Engagement & to Increase Participation STEM Disciplines	P031W080005	7/15/2008	10/1/2008	9/30/2009
Kukulu Ma Ke Kahua: Building on our Foundation	P031W120005	9/5/2012	10/1/2012	9/30/2013
UHWO Pueo Scholars: Programming, Services and Support for Student Excellence (Part A: Individual Development)	P031W140003	9/23/2014	10/1/2014	9/30/2015
Windward CC				
Hanaiaulu: Feed and Grow, Nurturing Student Parents and STEM at Windward CC through Renovation	P031V140007	9/25/2014	10/1/2014	9/30/2015
Redefining Student Services	P031W050003	6/17/2008	10/1/2008	9/30/2009
Hale Ao Renovation and Hawaiian Studies Curriculum Expansion	P031W100004	10/5/2010	10/1/2010	9/30/2011
Kakoo Koolau - Strengthening Student and Institutional Engagement at Windward CC	P031W100007	10/5/2010	10/1/2010	9/30/2011
Hulili-A Collaborative Grant Between UH-Manoa and Windward CC to Improve the Transfer and Success Rates of Native Hawaiian Students	P031W100012	10/5/2010	10/1/2010	9/30/2011
Strengthening Student and Institutional Engagement through Hawaiian Studies Curriculum Expansion and Implementation	P031W120004	9/13/2012	10/1/2012	9/30/2013

Note: An additional Title III grant was excluded from the list owing to only three months of activity in the evaluation period.

APPENDIX B - STUDENT SURVEY INSTRUMENT

Kuahui A Kū Ka Hale - STUDENTS																						
Welcome																						
<p>Thank you for participating in this survey of student experiences and observations during your time in the University of Hawai'i system. Your responses will contribute to an evaluation of the UH system's programs and projects that were funded by the federal Title III program.</p> <p>As the invitation email mentioned, your responses will be confidential and there are no questions that will ask any identifying information from you.</p> <p>By clicking "Next," you are acknowledging that you have received, read, and understand the Consent Agreement that was attached to the invitation email you received and are willing and able to participate in this survey. Please click "Next" to begin the survey.</p>																						
Part I: Enrollment																						
<p>The first portion of the survey seeks to not only determine when and where you were enrolled in the University of Hawai'i system, but also your unique journey while pursuing your college education.</p> <p>The purpose of these questions is largely to understand the diversity of ways in which UH students pursue their educational goals, as well as the level to which you were exposed to some of the programs and resources available during your time at any particular UH campus.</p> <p>Please click "Next" to continue onto the questions.</p>																						
Part I: Enrollment																						
<p>Enrollment at the University of Hawai'i</p> <p>* 1. Where were you enrolled during the following years?</p> <table border="1"><thead><tr><th></th><th>Enrollment & location</th><th>Student type</th></tr></thead><tbody><tr><td>2008-09</td><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td>2009-10</td><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td>2010-11</td><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td>2011-12</td><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td>2012-13</td><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td>2013-14</td><td><input type="text"/></td><td><input type="text"/></td></tr></tbody></table>			Enrollment & location	Student type	2008-09	<input type="text"/>	<input type="text"/>	2009-10	<input type="text"/>	<input type="text"/>	2010-11	<input type="text"/>	<input type="text"/>	2011-12	<input type="text"/>	<input type="text"/>	2012-13	<input type="text"/>	<input type="text"/>	2013-14	<input type="text"/>	<input type="text"/>
	Enrollment & location	Student type																				
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Part I: Enrollment

Not-traditional Student Status

2. Prior to attending your UH campus, how long had it been since you'd been enrolled in any education program?

- ☐ I enrolled the semester **immediately following my previous educational program** (e.g., high school, trade school, certificate program, college)
- ☐ I enrolled around **1 year** after leaving my previous educational program
- ☐ I enrolled around **2 to 5 years** after leaving my previous educational program
- ☐ I enrolled around **6 to 10 years** after leaving my previous educational program
- ☐ I enrolled **more than 10 years** after leaving my previous educational program
- ☐ Don't know/don't remember

Part I: Enrollment

Current Enrollment

3. Are you currently enrolled at a college or university?

- ☐ Yes, I am enrolled at a UH campus.
- ☐ Yes, I am enrolled at another institution
- ☐ No, I am not currently enrolled at any colleges or universities.

Part I: Enrollment

Former Enrollment

4. If you are not currently enrolled at a college or university, when was the last year you were enrolled?

5. Where were you enrolled?

6. Did you complete your studies that year (e.g., a certificate, an associates degree, or a masters degree)?

- ☐ Yes
- ☐ No
- ☐ Uncertain/I don't know

Part I: Enrollment

Summary Enrollment Questions

7. A few final questions about your enrollment that will help us fully understand your unique circumstances (even though some might seem similar to earlier questions)

During the period from 2008 to 2014:

	Yes	No	Unsure / I don't know
Did you start college for the first time?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you transfer from one UH campus to another UH campus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you transfer from another college/university (not UH) to a UH campus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you transfer from a UH campus to another college/university (not UH)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you stop attending college (i.e., left without completing your degree)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you complete your degree requirements at a UH campus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you complete your degree requirements at another college/university (not UH)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part II: Life Outside of School

The following questions ask about some of the other things that were going on in your life during your time attending University of Hawai'i campuses from 2008 to 2014. These questions are important in order to learn more about the ways in which programs and resources help support students as they pursue their education goals.

If you attended more than one University of Hawai'i campus between 2008 and 2014, then we ask that you select only one of those campuses as you respond to the remaining questions in this survey. (If you attended more than one campus, don't worry: later, you'll be given an opportunity to request a link to complete another, shorter survey about other campuses you may have attended during the 2008-2014 time period.)

8. Which campus that you attended between 2008 and 2014 will be the basis of your responses for the remainder of the survey?

Part II: Life Outside of School

Where You Lived During College

9. Where were you living while you were enrolled at UH between 2008 and 2014?

- ☐ At the home where I grew up
- ☐ Campus housing: Dormitory or residence hall
- ☐ Campus housing: University-owned apartment
- ☐ Campus housing: Family or special-needs housing
- ☐ Near-campus housing (e.g., theme house, fraternity or sorority house)
- ☐ Off-campus housing (e.g., your own apartment, or a rented room)
- ☐ Temporary housing (e.g., staying with friends, emergency housing, or a hotel)
- ☐ Other (please specify)

Part II: Life Outside of School

Relationships & Responsibilities During College

10. During your time at your UH campus, what else was going on in your life as you were pursuing your educational goals?

	No	Yes, during a portion of that time	Yes, during the entire time I was enrolled there	Prefer not to answer
I was married.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was living with my boyfriend/girlfriend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was a parent or guardian of at least one child (under 18 years old).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was a caregiver to an elder (e.g., parent, grandparent, or auntie).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I paid for daycare for a child or elder.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was managing a medical condition of my own.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experienced a death in my family or of a close friend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was living independently, without financial support from my parents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part II: Life Outside of School

Financial Obligations During College

11. During your time at your UH campus, what financial obligations did you have as you were pursuing your educational goals?

	No	Yes, during a portion of that time	Yes, during the entire time I was enrolled there	Prefer not to answer
I had a full-time job (i.e., 40 or more hours per week).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had a part-time job (i.e., less than 40 hours per week).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was employed at more than one job at the same time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was making rent or mortgage payments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I received scholarships, fellowships, or other awards to help pay my tuition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I took out student loans to help pay my tuition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I received financial assistance from family and/or friends to help pay my tuition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part II: Life Outside of School

Education Motivations

12. On a scale ranging from "totally agree" to "totally disagree," please rate your agreement with the following statements when considering your **motivations** to do well in college.

	Totally agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Totally disagree
I didn't want to embarrass my family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family was making sacrifices for my education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to learn the material.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I needed grades to get into graduate or professional school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Graduating from college would help me get a job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to keep up with my friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My teachers expected me to do well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My teachers encouraged me to work hard.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I didn't want to look foolish or stupid in class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I didn't do well, people would look down on others like me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to acquire more skills to help my community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

The following questions ask about some of the experiences you may have had during your time at your UH campus, as well as your impressions and opinions of what was happening around you.

Please click "Next" to continue.

Part III: Experiences & Impressions During College

Introduction to the Campus

13. During your time at your UH campus, did you participate in any of the following activities/programs to help introduce you to the campus?

	Yes	No	Unsure
A <u>one-day</u> orientation to the campus and its resources before the start of your first semester?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A <u>multi-day</u> orientation to the campus and its resources before the start of your first semester?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A <u>multi-week</u> orientation to the campus and its resources before the start of your first semester?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A <u>first-semester</u> course (e.g., UNIV 101) that provided orientation to the courses available at your campus and the registration process, and other campus resources and services?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A <u>year-long</u> course (e.g., UNIV 101) that provided orientation to the courses available at your campus, the registration process, and other campus resources and services?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An assigned <u>peer mentor or tutor</u> during your first year to assist with the transition to college?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A <u>"transition" program</u> that helped with the move from one campus to another campus through services such as auto-admission and academic planning?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A <u>Hawaiian-based</u> course or program that provided orientation or instruction to Hawaiian culture, practices, history, or knowledge?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

Study Behaviors & Preferences

14. Once you were enrolled and attending classes, you may have adopted different strategies in order to complete your courses' assignments. On a scale ranging from "always" to "never," please rate the frequency with which you...

	Always	Very often	Often	Sometimes	Rarely	Never
Raised your hand during a class when you didn't understand something.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Approached a professor after class to ask a question.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consulted additional materials in the library or online.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Used computers and printers at a campus computer lab.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Made use of a science, technology, or media lab on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Studied with other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Studied by yourself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organized study groups with friends or classmates.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought help from a formal tutor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought academic help from a friend or classmate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

Giving & Receiving Help

15. On a scale ranging from "always" to "never," please rate the frequency with which you...

	Always	Very often	Often	Sometimes	Rarely	Never
Sought help for your own writing skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helped another student with their writing skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought help for your own reading skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helped another student with their reading skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought help for your own mathematical skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helped another student with their mathematical skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought help for your own test-taking skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helped another student with their test-taking skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought help for your own time-management skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helped another student with their time-management skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sought help for your own understanding of Hawaiian language or culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helped another student with their understanding of Hawaiian language or culture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

Campus Resources

16. On a scale ranging from “always” to “never,” please rate the frequency with which you...

	Always	Very often	Often	Sometimes	Rarely	Never
Spent time at a campus student center.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spent time at a Native Hawaiian student center/Native Hawaiian Student Services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Used college and career placement services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Studied or collaborated on a project in a dedicated Native Hawaiian learning space.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visited an academic advisor to discuss your progress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spent time at a lo'i (taro patch) on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ate at a dining hall, cafeteria, or food court on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spoke to a financial aid counselor about money matters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spent time at a traditional Hawaiian hale (building) on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Purchased items at the campus bookstore.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visited the Hawaiian archives in the campus library.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

Event Participation

17. During your time at your UH campus, how often did you attend or participate in any of the following events?

	Always	Very often	Often	Sometimes	Rarely	Never
A concert, play, or other performance on campus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any Hawaiian language classes, seminars, or workshops on campus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A campus culinary event?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A Hawaiian food or locally grown culinary event?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A traditional Hawaiian ceremony (e.g., kipaepae, welcoming guests, honoring colleagues)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An event in which the wahi pana (history and significance of the place or land) was shared?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A rally or demonstration for a specific cause?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A workshop on traditional Hawaiian arts, such as kihei (ceremonial garment), lei (garland), or 'ohe kapala (wood carvings)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A book reading or presentation by an invited speaker?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any event in which 'oli (chants), mele (songs), or mo'olelo (stories) were shared?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A hula class, seminar, or workshop?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A financial aid fair?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A ho'olaule'a (celebration or festival) on campus?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

Sense of Belonging on Campus

18. On a scale ranging from "totally agree" to "totally disagree," please rate your agreement with the following statements:

	Totally agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Totally disagree
I felt like I was part of the community on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt like I belonged on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt a strong connection to the community on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I attended extracurricular events on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I discovered friends with interests similar to mine on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I grew more tolerant of other racial and ethnic groups.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I formed new relationships with other racial and ethnic groups.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made many friends and acquaintances on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt safe on campus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I preferred to spend time with people of my own race/ethnicity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

Academic Demands & Perceptions

19. On a scale ranging from "totally agree" to "totally disagree," please rate your agreement with the following statements:

	Totally agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Totally disagree
If instructors held negative stereotypes about certain groups, it did not affect their evaluations of individual students from that group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If <i>other students</i> held negative stereotypes about certain groups, it did not affect their evaluations of individual students from that group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I had let my instructors know that I had difficulty in class, they would have thought less of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had too little time to do things at home or in the community while attending college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was afraid of failing out of college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My course test scores in class were an accurate indicator of my academic abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I excelled academically, it reflected positively on my racial or ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I did poorly academically, it reflected poorly on my racial or ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part III: Experiences & Impressions During College

Cultural Sensitivity on Campus

20. On a scale ranging from “always” to “never,” please rate the frequency with which you experienced the following situations:

	Always	Very often	Often	Sometimes	Rarely	Never
A professor made you feel uncomfortable or self-conscious because of your race or ethnicity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking around campus, you were made to feel uncomfortable or self-conscious because of your race or ethnicity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Campus police asked you to present identification (other than when required of all people entering a room or building).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You heard derogatory remarks made by fellow students about your ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You heard derogatory remarks made by professors about your racial or ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You heard derogatory remarks by other college staff about your racial or ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part IV: Perceptions & Experiences Since College

For the following two questions, please share your thoughts about various topics, including your satisfaction with your college experience and your thoughts about its effect on who you are today.

Please click “Next” to continue.

Part IV: Perceptions & Experiences Since College

College Satisfaction.

21. On a scale ranging from “totally agree” to “totally disagree,” please rate your agreement with the following statements:

	Totally agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Totally disagree
My college experience made me a better person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My college experiences have prepared me for the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
College has better prepared me to deal with the real world.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the courses I took at college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the professors I had at college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the quality of instruction I received at college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the campus climate I experienced at college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend the UH campus that I attended to a friend or relative as a place to attend college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I had to do it all over, I would choose the UH campus that I attended again.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part IV: Perceptions & Experiences Since College

Cultural Identity

22. On a scale ranging from "totally agree" to "totally disagree," please rate your agreement with the following statements:

	Totally agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Totally disagree
I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a strong sense of belonging to my own ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand pretty well what my ethnic group membership means to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have often done things that will help me understand my ethnic background better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have often talked to other people in order to learn more about my ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a strong attachment towards my own ethnic group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Part V: Closing

The remaining questions in the survey simply ask some general demographic questions and share some information about ways in which to provide more feedback to this evaluation project about the impact of Title III funding throughout the UH system.

Please click "Next" to continue.

Part V: Closing

Demographics: Age & Gender

23. What is your age (in years)?

24. What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other

Part V: Closing

Demographics: Ethnic Background

25. To which of the following ethnic groups do you belong?

(Check all that apply.)

- | | | |
|---|---|--------------------------------------|
| <input type="checkbox"/> Native Hawaiian/Part-Hawaiian/Mixed Hawaiian | <input type="checkbox"/> African American or Black | <input type="checkbox"/> Korean |
| <input type="checkbox"/> Samoan | <input type="checkbox"/> American Indian/Alaskan Native | <input type="checkbox"/> Laotian |
| <input type="checkbox"/> Tongan | <input type="checkbox"/> Hispanic/Latino | <input type="checkbox"/> Thai |
| <input type="checkbox"/> Guamanian or Chamorro | <input type="checkbox"/> Asian Indian | <input type="checkbox"/> Vietnamese |
| <input type="checkbox"/> Micronesian | <input type="checkbox"/> Chinese | <input type="checkbox"/> Other Asian |
| <input type="checkbox"/> Other Pacific Islander | <input type="checkbox"/> Filipino | |
| <input type="checkbox"/> Caucasian or White | <input type="checkbox"/> Japanese | |

26. To your knowledge, were any of your ancestors Hawaiian?

- ☐ Yes
- ☐ No

Part V: Closing

Demographics: Educational Attainment

27. What is the highest level of education that you have completed so far?

- ☐ High school diploma or GED
- ☐ Less than one year of college
- ☐ One year of college
- ☐ Two or more years of college, but no degree
- ☐ Associate's degree or certificate
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctorate or professional degree

Part V: Closing

Additional Feedback

28. Based on the questions that you have answered so far, as well as the intention of this survey to help the University of Hawai'i system to better understand the impact of some of the federal funding it has received -- specifically, from Title III -- is there any other information that you wish to share with us about your college experience that has not been covered here, or that can provide more details concerning your responses? If so, please add those comments here.

APPENDIX C – STUDENT SURVEY SUPPLEMENTAL RESULTS

Proxy Title III Event Results

Sense of belonging			
Title III Events (proxy)	Low	Medium	High
Total	26.3%	29.5%	44.2%
Low attendance	33.8%	31.8%	34.4%
Medium attendance	0.6%	24.4%	75.0%
High attendance	3.0%	16.8%	80.2%

Identity formation			
Title III Events (proxy)	Low	Medium	High
Total	38.1%	25.5%	36.4%
Low attendance	46.0%	28.1%	25.9%
Medium attendance	14.8%	21.6%	63.6%
High attendance	7.9%	8.9%	83.2%

Educational agency			
Title III Events (proxy)	Low	Medium	High
Total	78.2%	18.6%	3.2%
Low attendance	85.9%	12.9%	1.2%
Medium attendance	59.7%	34.7%	5.7%
High attendance	40.6%	42.6%	16.8%

Kuleana			
Title III Events (proxy)	Low	Medium	High
Total	28.4%	65.1%	6.5%
Low attendance	33.9%	60.9%	5.1%
Medium attendance	10.8%	77.8%	11.4%
High attendance	8.9%	80.2%	10.9%

Proxy Title III Resources Results

Sense of belonging			
Title III Resources (proxy)	Low	Medium	High
Total	26.3%	29.5%	44.2%
Low use	29.9%	29.2%	40.9%
Medium use	2.7%	32.7%	64.7%
High use	0.0%	11.1%	88.9%

Identity formation			
Title III Resources (proxy)	Low	Medium	High
Total	38.1%	25.5%	36.4%
Low use	41.2%	26.2%	32.7%
Medium use	18.7%	20.7%	60.7%
High use	11.1%	33.3%	55.6%

Educational agency			
Title III Resources (proxy)	Low	Medium	High
Total	78.2%	18.6%	3.2%
Low use	81.7%	16.1%	2.2%
Medium use	56.7%	35.3%	8.0%
High use	33.3%	33.3%	33.3%

Kuleana			
Title III Resources (proxy)	Low	Medium	High
Total	28.4%	65.1%	6.5%
Low use	30.8%	63.3%	5.9%
Medium use	13.3%	75.3%	11.3%
High use	0.0%	100.0%	0.0%

APPENDIX D – STAFF SURVEY INSTRUMENT

Kuahui A Kū Ka Hale - FACULTY & STAFF Survey
Welcome
<p>Thank you for participating in this survey of your experiences during your employment in the University of Hawai'i system. Your responses will contribute to an evaluation of the UH system's programs and projects that were funded by federal Title III grants.</p> <p>As the invitation email mentioned, your responses will be confidential and there are no questions that will ask any identifying information from you.</p> <p>By clicking "Next," you are acknowledging that you have received, read, and understand the Consent Agreement, the link to which was included in the invitation email that you received, and are willing and able to participate in this survey.</p>
Before We Begin...
<p>As we mentioned in the survey invitation, this survey will contribute to a larger project evaluating the Title III programs and projects that have occurred throughout the UH system during the past decade.</p> <p>Title III (Parts A and F) is a federal Dept. of Education program dedicated to supporting colleges and universities who serve substantial numbers of Native Hawaiians and/or Alaska Natives.</p> <p>All ten UH campuses have been recipients of Title III funding over the years.</p>
Before We Begin... (cont'd)
<p>The goal of the federal Title III program can be summarized as "to increase institutional capacity to better support Native Hawaiian student success."</p> <p>These two elements - increasing <i>capacity</i> and supporting <i>student success</i> - are the focus of this survey. The term "capacity" can refer to many things, including spaces to learn, professional development for staff/faculty, systems improvements, and curricula and program development.</p> <p>The questions seek to determine whether respondents have seen changes related to these two objectives during their time at UH.</p> <p>While some of the questions refer to your perceptions of capacity and student success in general, given the focus of Title III on Native Hawaiian-serving institutions, other questions refer to Native Hawaiians specifically.</p>

Part I: Employment History

The first portion of the survey seeks to determine where you were employed in the University of Hawai'i system.

The purpose of this question is largely to understand the diversity of UH locations at which faculty and staff have worked over the period during which Title III grant awards were implemented on campuses.

Please note that the survey does not inquire about specific years or the duration of your employment at any specific campus, nor does it ask for other specifics like job title, pay grade, or full-time/part-time status.

Please click "Next" to continue onto the questions.

Part I: Employment History

Employment at the University of Hawai'i during evaluation period.

* 1. The period during which Title III programming is being evaluated spans from 2008 to 2016.

Were you employed at any UH campus during any of those years?

- ☐ Yes
☐ No

Part I: Employment History (cont'd)

Employment at the University of Hawai'i: specific campuses.

2. On which campuses were you employed in any capacity between 2008 and 2016?

(Please check all that apply. If you worked off-site or at a satellite location, simply check the box(es) for the primary campus(es) to which you were attached.)

- ☐ Hawai'i Community College
☐ Univ. of Hawai'i - Hilo
☐ Honolulu Community College
☐ Kapi'olani Community College
☐ Kaua'i Community College
☐ Leeward Community College
☐ Univ. of Hawai'i - Mānoa
☐ Maui Community College/College
☐ Univ. of Hawai'i West O'ahu
☐ Windward Community College

Part II: Experiences & Impressions During Your UH Employment

The following questions seek your opinion of the current state of UH's capacity to support student success and how that capacity may have changed over the years.

3. On a scale ranging from "Very well" to "Very poorly", how would you say UH is doing with respect to its capacity to support overall student success?

Very well	Well	Somewhat well	Somewhat poorly	Poorly	Very poorly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Compared to when you first began working in the UH system, do you feel that UH's capacity is better, worse, or has not changed since then?

- ☐ Better
- ☐ Worse
- ☐ No change

Part II: Experiences & Impressions During Your UH Employment

Switching gears, these questions seek your opinion of the current state of UH's capacity to support Native Hawaiian student success and how that capacity may have changed over the years.

5. On a scale ranging from "Very well" to "Very poorly", how would you say UH is doing with respect to its capacity to support Native Hawaiian student success?

Very well	Well	Somewhat well	Somewhat poorly	Poorly	Very poorly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Compared to when you first began working in the UH system, do you feel that UH's capacity to support Native Hawaiian students is better, worse, or has not changed since then?

- ☐ Better
- ☐ Worse
- ☐ No change

Part II: Experiences & Impressions During Your UH Employment

For the following questions, the focus switches from UH (as a system) to you specifically, in your role as an employee of that system.

7. On a scale ranging from "Very well" to "Very poorly", how would you say YOU are doing with respect to your own capacity to support student success: both in general and with respect to Native Hawaiian students?

	Very well	Well	Somewhat well	Somewhat poorly	Poorly	Very poorly
Overall student success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Native Hawaiian student success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Compared to when you first began working in the UH system, do you feel your own capacity is better, worse, or has not changed since then?

	Better	Worse	No change
Overall student success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Native Hawaiian student success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Since the time when you first began working at UH, have you participated in professional development opportunities in any of the following areas?

- ☐ 'Olelo Hawai'i (Hawaiian language)
- ☐ Hawaiian history
- ☐ Hawaiian cultural practices (e.g., lei making, hula, weaving, voyaging)
- ☐ Wahi pana (i.e., learning more about the place in which your campus is located)
- ☐ Mo'oku'ahau (genealogy)
- ☐ Current Hawaiian issues

Part III: Before We Go...

Any other Title III-related thoughts to share?

10. Based on the questions that you have answered so far, as well as the intention of this survey to help the University of Hawai'i system better understand the impact of the federal Title III funding it has received, is there any other relevant information that you wish to share with us that has not been covered here? If so, please add those comments here.

APPENDIX E – FOCUS GROUP AND INTERVIEW PROTOCOLS

Title III Focus Group Protocol

1. **Welcome & Introductions**
 - a. Opening protocol
 - i. Blessing or oli
 - b. Introductions from everyone (including project team), with:
 - i. Name
 - ii. Role/background
 - iii. Ice-breaker question
 - c. Thank everyone for their time.
 - d. Alert everyone to note taking (and possible recording) that will occur.
2. **Housekeeping**
 - a. Logistics:
 - i. Bathrooms
 - ii. Refreshments
 - b. Requested actions from everyone (including project team members):
 - i. Listening to one another
 - ii. Allowing other opinions to be shared without negative responses
 - iii. Digging deep
 - iv. Asking questions when more context is required or something is unclear
3. **Purpose & Goal for the Day**
 - a. **Purpose:** Leverage the experiences and perspectives of current and former Title III faculty and staff to discern how Title III strengthens UH as an institution and/or supports Native Hawaiian student success.
 - b. **Goal:** Better understand the context of Title III programs and projects according to those who are closest to them.
4. **Questions**

1	<p>STUDENT SUCCESS. Lots of people in education talk about “student success.” The term is used widely in the Title III narrative in the context of Native Hawaiian student success, but is never explicitly defined.</p> <p><i>What does “student success” mean to you?</i></p> <p><i>Does the meaning of “Native Hawaiian student success” differ from that of generic “student success”?</i></p> <p>Prompts:</p> <ul style="list-style-type: none">• <i>Conventional outcomes of entry, persistence, and graduation?</i>• <i>Other outcomes: sense of belonging, leadership, collective kuleana, and identity formation?</i>
2	<p>STRENGTHENING INSTITUTIONS. One of the goals of Title III funding is to strengthen an institution’s ability to serve underrepresented students, Native Hawaiians in our context.</p> <p><i>What have you witnessed and/or experienced that might be an example of how the institution has been strengthened in its capacity to serve Native Hawaiians?</i></p>

	<i>If you haven't seen this, what would you like to see?</i>
3	<p>INSTITUTIONALIZATION.</p> <p>Many folks say that one way of strengthening the institution is by institutionalizing elements of the Title III grants so that they live beyond the grant period.</p> <p><i>What strategies have you used (or do you think might be effective) to move programs, projects, and positions from temporary statuses to more sustainable or permanent statuses?</i></p> <p><i>What challenges to creating sustainability have you experienced (or do you foresee)?</i></p> <p>Prompts:</p> <ul style="list-style-type: none"> • <i>Are you aware of any elements that have been adopted/institutionalized?</i> • <i>Policies? Procedures or protocols? Systems? Philosophies? Professional development?</i>
4	<p>PROMISING PRACTICES. Title III and other federal funds have been implementing new programs and projects throughout the UH system for the past two decades.</p> <p><i>Based on your experiences with such programs, what do you feel like is working best to support Native Hawaiian students and why do you think it is promising?</i></p> <p><i>What other practices would you like to see and why?</i></p>
5	<p>MAGIC WAND. The Title III program funds efforts that promote Native Hawaiian student success.</p> <p><i>If you had a magic wand and could make each of the 10 UH campuses truly Native Hawaiian-serving institutions, what would they look like?</i></p> <p><i>What are your hopes and dreams for the UH system in terms of serving Native Hawaiians?</i></p>

5. Closing

- a. Mahalo everyone.
- b. Distribute makana to participants:
 - i. Book (?)
 - ii. Candies
- c. Promise to share summary of this information gathering effort with all and welcome feedback
 - i. Confirm contact information
 - ii. Provide Title III contact information for follow-up questions from participants.
- d. Clean up.

Title III INTERVIEW/TESTIMONIAL Protocol

[Ensure that the correct Consent form is being used: the form labeled “Consent” provides confidentiality; the form labeled “Testimonial” is not confidential.]

1. Welcome & Introductions

- a. Opening protocol
 - i. Blessing or oli?
- b. Introductions from everyone (including project team), with:
 - i. Name
 - ii. Role
 - iii. Ice-breaker question: “Titles of three favorites: song, movie, book?”
- c. Thank interviewee for their time.
- d. Alert interviewee(s) that note taking and recording will occur.

2. Housekeeping

- a. Logistics:
 - i. Bathrooms
 - ii. Refreshments

3. Purpose & Goal for the Day

- a. **Purpose:** Leverage the experiences and perspectives of the interviewee(s) to discern how Title III projects and programs may have strengthened UH as an institution and/or supported Native Hawaiian student success.
- b. **Goal:** Better understand the context of Title III programs and projects according to those who are closest to them.

4. Questions

1	<p>INVOLVEMENT. Among many other funding sources, the UH system has been a recipient of federal Title III program funds for the past two decades. Some administrators have some direct experience with Title III, some have very little, and some have differing levels of involvement with them over the years.</p> <p><i>How would you describe your level of involvement with Title III grants while at UH?</i></p>
2	<p>INSPIRATION. Title III funding provides funding for a broad range of activities, ranging from construction of new buildings to professional development to direct programming for students.</p> <p><i>Is there a specific philosophy or strategy that has guided Title III activities on your campus?</i></p> <p><i>[Wait for answer before following up with the following...]</i></p> <p><i>Are there mo’olelo or other cultural traditions that have played a role in the development of Title III projects at your campus?</i></p>
3	<p>THEN AND NOW. The focus of Title III programming appears to have evolved on each UH campus over time. Additionally, many individuals involved in Title III – including program staff, grant directors, and campus chancellors – have come</p>

	<p>and gone.</p> <p><i>If you could describe the general theme of Title III on your campus when it first began, and Title III as it works now, what words or phrases come to mind?</i></p> <p><i>[Wait for answer before following up with the following...]</i></p> <p><i>What were some key milestones or turning points along that evolution?</i></p>
4	<p>STUDENT SUCCESS. Lots of people in education talk about “student success.” The term is used widely in the Title III narrative in the context of Native Hawaiian student success, but is never explicitly defined.</p> <p><i>What does “student success” mean to you?</i></p> <p><i>[Wait for answer before following up with the following...]</i></p> <p><i>Does the meaning of “Native Hawaiian student success” differ from that of generic “student success”?</i></p> <p>Prompts:</p> <ul style="list-style-type: none"> • <i>Conventional outcomes of entry, persistence, and graduation?</i> • <i>Other outcomes: sense of belonging, leadership, collective kuleana, and identity formation?</i>
5	<p>STRENGTHENING INSTITUTIONS. One of the goals of Title III funding is to strengthen an institution’s ability to serve underrepresented students, Native Hawaiians in our context.</p> <p><i>What have you witnessed and/or experienced that might be an example of how the institution has been strengthened in its capacity to serve Native Hawaiians?</i></p> <p><i>If you haven’t seen this, what would you like to see?</i></p>
6	<p>INSTITUTIONALIZATION. Many folks say that one way of strengthening the institution is by institutionalizing elements of the Title III grants so that they live beyond the grant period.</p> <p><i>What strategies have you used (or do you think might be effective) to move programs, projects, and positions from temporary statuses to more sustainable or permanent statuses?</i></p> <p><i>[Wait for answer before following up with the following...]</i></p> <p><i>What challenges to creating sustainability have you experienced?</i></p> <p>Prompts:</p> <ul style="list-style-type: none"> • <i>Are you aware of any elements that have been adopted or institutionalized?</i> • <i>Policies? Procedures or protocols? Systems? Philosophies? Professional development?</i>
7	<p>PROMISING PRACTICES. Title III and other federal funds have been implementing</p>

	<p>new programs and projects throughout the UH system for the past two decades.</p> <p><i>Based on your experiences with such programs, what do you feel like is working best to support Native Hawaiian students and why do you think it is promising?</i></p> <p><i>[Wait for answer before following up with the following...]</i></p> <p><i>What other practices would you like to see and why?</i></p>
8	<p>COOPERATION. Title III offers a finite amount of funding that is available to Native Hawaiian- and Alaska Native-serving institutions, so no one school or campus is guaranteed funding in any given cycle.</p> <p><i>Based on your experience, what kind of cooperation have you witnessed to secure Title III funding on your campus?</i></p> <p><i>[Wait for answer before following up with the following...]</i></p> <p><i>What about cooperation with other campuses on joint projects?</i></p>
9	<p>PROCESS. Title III grants fund significant portions of some campuses programs and projects. Accordingly, managing resources and requirements related to Title III funding is not trivial.</p> <p><i>If you could change the USDOE process for applying for or reporting on Title III grants, what would you change (if anything)?</i></p>
10	<p>MAGIC WAND. The Title III program funds efforts that promote Native Hawaiian student success.</p> <p><i>If you had a magic wand and could make each of the 10 UH campuses truly Native Hawaiian-serving institutions, what would they look like?</i></p> <p><i>[Wait for answer before following up with the following...]</i></p> <p><i>What are your hopes and dreams for the UH system in terms of serving Native Hawaiians?</i></p>

5. Closing

- a. Mahalos.
- b. Distribute makana.
- c. Promise to share summary of this information gathering effort with all and welcome feedback
 - i. Confirm contact information
 - ii. Provide Title III contact information for follow-up questions.
 - iii. Depart.

APPENDIX F – ONE-TO-MANY SAS® MACRO

```

/* ***** */
/* ***** */
/* Matching macro */
/* ***** */
/* ***** */

%MACRO OneToManyMTCH (
    Lib,
    /* Library Name */
    Dataset, /* Data set of all patients */
    depend, /* Dependent variable that indicates Case or Control */
    /* 1 for Cases, 0 for Controls */
    SiteN,
    /* Site/Hospital ID */
    PatientN,
    /* Patient ID */
    matches, /* Output data set of matched pairs */
    NoCtrls); /* Number of controls to match to each case */

*%MACRO OneToManyMTCH (
    study,
    /* Libname */
    ALLPropen,
    /* Dataset (output from Proc Logistic) */
    tiii_FYP_any, /* Dependent variable: Any first-year experience pgm */
    st_cmp, /* UH campus */
    PIDM,
    /* Student random ID */
    Matches_1,
    /* Output data set of matched pairs */
    1);
/* Number of controls to match to each case */

/* ***** */
/* Macro to create Case & Control datasets */
/* ***** */

%MACRO INITCC(CaseAndCtrls,digits);
    data tcases (drop=cprob)
        tctrl (drop=aprob) ;
    set &CaseAndCtrls. ;

    /* Create the data set of Controls */
    if &depend. = 0 and prob ne . then do;
        cprob = Round(prob,&digits.);
        Cmatch = 0;
        Length RandNum 8;
        RandNum = ranuni(1234567);
        Label RandNum = 'Uniform Randomization Score';
        output tctrl;
    end;
    /* Create the data set of Cases */
    else if &depend. = 1 and prob ne . then
    do;
        Cmatch = 0;
        aprob = Round(prob,&digits.);
        output tcases;
    end;
    run;
    %SORTCC;
%MEND INITCC;

/* ***** */
/* Macro to sort Cases & Controls dataset */
/* ***** */

%MACRO SORTCC;
    proc sort data=tcases
        out=&LIB..Scase;
    by
        prob;
    run;
    proc sort data=tctrl
        out=&LIB..Scontrol;
    by
        prob randnum;

```

```

run;
%MEND SORTCC;

/* ***** */
/* Macro to perform the match */
/* ***** */

%MACRO MATCH (MATCHED,DIGITS);
data    &lib..&matched.
        (drop = Cmatch randnum aprob cprob start oldi curctrl matched);

/* select the cases data set */
set     &lib..SCase ;
curob + 1;
matchto = curob;
if      curob = 1 then do;
        start = 1;
        oldi = 1;
end;

/* select the controls data set */
DO i = start to n;
        set &lib..Scontrol point = i nobs = n;
        if i gt n then goto startovr;
        if _Error_ = 1 then abort;
        curctrl = i;

        /* output control if match found */
        if aprob = cprob then do;
                Cmatch = 1;
                output &lib..&matched.;
                matched = curctrl;
                goto found;
        end;

        /* exit do loop if out of potential matches */
        else if cprob gt aprob then goto nextcase;
        startovr: if i gt n then goto nextcase;
END; /* end of DO LOOP */

/* If no match was found, put pointer back*/
nextcase:
if Cmatch=0 then start = oldi;

/* If a match was found, output case and increment pointer */
found:
if Cmatch = 1 then do;
        oldi = matched + 1;
        start = matched + 1;
        set &lib..SCase point = curob;
        output &lib..&matched.;
end;
retain oldi start;
if _Error_=1 then _Error_=0;
run;

/* get files of unmatched cases and controls */
proc sort      data    = &lib..scase
                out     = sumcase;
by              &SiteN. &PatientN.;
run;

proc sort      data    = &lib..scontrol
                out     = sumcontrol;
by              &SiteN. &PatientN.;
run;

proc sort      data    = &lib..&matched.
                out     = smatched (keep=&SiteN. &PatientN. matchto);
by              &SiteN. &PatientN.;
run;

data    tcases (drop=matchto);
merge  sumcase(in=a)
        smatched;
by      &SiteN. &PatientN.;
if a and matchto = . ;
cmatch = 0;
aprob =Round(prob,&digits.);

```



```

run;

data      tcctl (drop=matchto);
merge     sumcontrol(in=a) smatched;
by        &SiteN. &PatientN.;
if a and matchto = . ;
cmatch = 0;
cprob = Round(prob,&digits.);
run;

%SORTCC

%MEND MATCH;

/* ***** */
/* Macro to call macro MATCH for each of      */
/* the 8-digit to 1-digit matches              */
/* ***** */

%MACRO CallMATCH;
/* Do a 8-digit match */
%MATCH(Match8,.0000001);
/* Do a 7-digit match on remaining unmatched*/
%MATCH(Match7,.000001);
/* Do a 6-digit match on remaining unmatched*/
%MATCH(Match6,.00001);
/* Do a 5-digit match on remaining unmatched*/
%MATCH(Match5,.0001);
/* Do a 4-digit match on remaining unmatched */
%MATCH(Match4,.001);
/* Do a 3-digit match on remaining unmatched */
%MATCH(Match3,.01);
/* Do a 2-digit match on remaining unmatched */
%MATCH(Match2,.1);
/* Do a 1-digit match on remaining unmatched */
%MATCH(Match1,.1);
%MEND CallMATCH;

/* ***** */
/* Macro to merge all the matches files        */
/* into one file                               */
/* ***** */

%MACRO MergeFiles(MatchNo);
data      &matches.&MatchNo. (drop = matchto);
set       &lib..match8(in=a)
          &lib..match7(in=b)
          &lib..match6(in=c)
          &lib..match5(in=d)
          &lib..match4(in=e)
          &lib..match3(in=f)
          &lib..match2(in=g)
          &lib..match1(in=h);
if a then match_&MatchNo. = matchto;
if b then match_&MatchNo. = matchto + 10000;
if c then match_&MatchNo. = matchto + 100000;
if d then match_&MatchNo. = matchto + 1000000;
if e then match_&MatchNo. = matchto + 10000000;
if f then match_&MatchNo. = matchto + 100000000;
if g then match_&MatchNo. = matchto + 1000000000;
if h then match_&MatchNo. = matchto + 10000000000;
run;
%MEND MergeFiles;

/* ***** */
/* ***** */
/* Perform the initial 1:1 Match                */
/* ***** */
/* ***** */

/* Create file of cases and controls */
%INITCC(&LIB..&dataset..0000001);

/* Perform the 8-digit to 1-digit matches */
%CallMATCH;

/* Merge all the matches files into one file */
%MergeFiles(1)

```

```

/* ***** */
/* ***** */
/* Perform the remaining 1:N Matches */
/* ***** */
/* ***** */

%IF &NoCtrls. gt 1 %Then %DO;
    %DO i = 2 %TO &NoCtrls.;
        %let Lasti=%eval(&i. - 1);

        /* ***** */
        /* Start with cases from the last matched */
        /* Cases file and the remaining un-matched */
        /* Controls. */
        /* NOTE: The unmatched Controls file */
        /* (Scontrol) is created at end of the */
        /* previous match. */
        /* Select the matched cases from the last */
        /* matched file. */
        /* ***** */

        data    &LIB..Scase;
        set     &matches.&Lasti.;
        where   &Depend. = 1;
        run;

        /* ***** */
        /* Perform the 8-1 digit matches between */
        /* matched cases and the unmatched controls */
        /* ***** */

        %CallMATCH;

        /* ***** */
        /* Merge the 8-digit to 1-digit matches */
        /* files into one file */
        /* ***** */

        %MergeFiles(&i.)
        %DO m = 1 %TO &Lasti.;
            data    &matches.&i.;
            set     &matches.&i.;
            if      &Depend.=0 then Match_&m. = .;
            run;
        %END;

        /* ***** */
        /* Determine which OLD controls correspond */
        /* to the kept cases */
        /* ***** */

        %DO c = 1 %TO &Lasti.;

            /* Select the KEPT cases */
            proc sort    data    = &matches.&i.
                        out      = skipcases (keep = Match_&c.);
            by           Match_&c.;
            where        &Depend. = 1;
            run;

            /* Get the OLD controls */
            proc sort    data    = &matches.&Lasti.
                        out      = soldcontrols&c.;
            by           Match_&c.;
            where        &Depend. = 0 and Match_&c. ne . ;
            run;

            /* Get the OLD Controls that correspond to the kept Cases */
            data    keepcontrols&c.;
            merge   skipcases (in = a)
                    soldcontrols&c. (in = b);
            by     Match_&c.;
            if     a;
            run;

        %END;

        /* ***** */
        /* Combine all OLD Controls into one file */
        /* ***** */

```

```

/* ***** */

data    keepcontrols;
set     keepcontrols1 (obs=0);
run;

%DO k = 1 %TO &Lasti.;
    data    keepcontrols;
    set     keepcontrols
            keepcontrols&k.;
    run;
%END;

/* ***** */
/* Append the OLD matched controls to the */
/* new file of matched cases and controls */
/* ***** */

data    &matches.&i.;
set     &matches.&i.
        keepcontrols;
run;

/* ***** */
/* If there are more matches to be made, */
/* add the previously matched, but not */
/* kept, controls back into the pool of */
/* unmatched controls */
/* ***** */

%if &i. lt &NoCtrls. %then %do;
    %DO z = 1 %TO &Lasti.;

        /* Select all the KEPT Cases */
        proc sort    data    = &matches.&i.
                    out      = skeepcases (keep =
Match_&z.);

        by           Match_&z.;
        where        &Depend. = 1;
        run;

        /* Select all the OLD Controls */
        proc sort    data    = &matches.&Lasti.
                    out      = soldcontrols&z.;
        by           Match_&z.;
        where        &Depend. = 0 and Match_&z. ne .;
        run;

        /* Keep the OLD controls that correspond to the NOT KEPT cases */
        /* Drop the previous Match_X variable */
        /*
        data    AddBackControls&z. (drop = Match_&z.);
        merge   skeepcases (in = a)
                soldcontrols&z. (in = b);
        by      Match_&z.;
        if      b and not a;
        run;

        %END; /* End DO */

        /* Drop the previous Match_X variable */
        data    &LIB..Scontrol (drop = Match_&lasti. );
        set     &LIB..Scontrol;
        run;

        /* Append */
        %DO y = 1 %TO &Lasti.;
            data    &LIB..Scontrol;
            set     &LIB..Scontrol
                    AddBackControls&y.;
            run;
        %END; /* End DO */
    %end; /* End IF */

%END; /* End Main DO */
%END; /* End Main IF */

/* ***** */
/* ***** */

```

```

/* Save the final matched pairs data set      */
/* ***** */
/* ***** */

/* Sort file by Treatment Variable */
proc sort      data      = &matches.&NoCtrls.
               out       = &lib..&matches.;
by
run;
               &depend.;

%MEND OneToManyMTCH;

```

APPENDIX G – FULL MULTIVARIATE MODELS FOR COMMUNITY COLLEGE OUTCOMES

APPENDIX H – FULL MULTIVARIATE MODELS FOR 4-YEAR CAMPUS OUTCOMES