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KAMEHAMEHA SCHOOLS

# Influential Factors in Degree Attainment and Persistence to Career or Further Education for At-risk/High Educational Needs Students

By Pacific Policy Research Center

This review of the retention literature focuses on current frameworks and research with particular attention paid to minority students (including Hawaiian and other indigenous groups when possible). The review is organized into three sections: Relevant Theoretical Frameworks, Factors Influencing Student Retention, and Programs and Practical Implications. With regard to theory and background research, a theoretical movement toward the inclusion of social and cultural capital in addition to “understandings of groups, power, and oppression” (Tierney, 2004, p. 217) was found in the research. The literature was generally focused on the following factors with regard to student persistence: academics, student satisfaction and attitudes, and social and family support. This review concludes with practical implications and programs identified in the literature, much of which focused on the use of mentoring to increase student persistence.

**Relevant Theoretical Frameworks<sup>1</sup>**

In his 1975 review of the retention literature, Tinto critiqued the research as deficient in theoretical models that explain why students leave college. He responded to this gap in the literature by formulating his theory of college student departure based on Durkheim’s theory of suicide (Tinto, 1975). Tinto writes: “social conditions affecting dropout from the social system of the college would resemble those resulting in suicide in the wider society; namely, insufficient interactions with others in the college and insufficient congruency with the prevailing value patterns of the college collectivity” (p. 91-92). According to Braxton (2004), Tinto’s theory “enjoys near paradigmatic stature in the study of college student departure” and is cited over 400 times with 170 dissertations related to the theory (p. 2).

Tinto’s theory states that students bring pre-college characteristics, goals, and intentions with them to college, and these pre-college attributes influence a student’s decision to persist<sup>2</sup>. However, the model also sees students’ decisions to leave college as a longitudinal process. As students continuously interact with their peers, faculty, administrators, and other constituents of their institutions, they modify their goals and intentions. These interactions are nested within the demands on the students outside of the classroom, which also simultaneously and continuously influence the students’ goals and intentions. When a student perceives positive experiences and outcomes such as good grades or feelings of acceptance, they become

1 See APPENDIX A for a summary of frameworks, factors, and implications.

2 A simplified illustration of Tinto’s model can be found in APPENDIX B.

socially and academically integrated into the college culture and decide to remain at the institution. Negative outcomes, such as poor grades or inability to make friends, lead to the student feeling distant from the institution and choosing to leave. Tinto's model has been critiqued, revised, and added to over the years.

Braxton, Sullivan, and Johnson (1997) pointed out deficiencies in Tinto's theory, and Braxton's (2004) edited volume, *Reworking the Student Departure Puzzle*, is an answer to the areas of Tinto's theory that are lacking. The volume provides "various approaches to the revision of Tinto's theory as well as new theoretical directions" (p. 3). Three of the chapters in the volume are especially relevant to this review.

Rendón, Jalomo, and Nora's contribution to Braxton's (2004) volume offers a critique of Tinto's theory as a product of acculturation/assimilation viewpoints. They describe that "the assumption that minority students must separate from their cultural realities and take the responsibility to become incorporated into colleges' academic and social fabric in order to succeed" (p. 129) excuses institutions from dealing with their own barriers to persistence. Furthermore, integration ignores the ability of minority students to "operate in multiple contexts" (p. 129). Rendón, Jalomo, and Nora offer the concept of dual socialization as an alternative to assimilation. Dual socialization relies on the shared elements between two cultures. This perspective forces institutions to provide opportunities for minority students to culturally connect with the university through the areas shared with their own culture. Furthermore, they critique current assumptions about the definitions of student engagement (Astin, 1993). While engagement in college activities has often been linked with persistence, Latino students from working-class backgrounds required support from outside of the institution as well. For the authors, this conclusion reflects "other forms of engagement that can have a positive impact on persistence" (p. 149).

Kuh and Love's section of Braxton's (2004) volume add to the revisions of Tinto's theory by providing a cultural perspective. From the research, they formulate eight propositions that help explain college student departure "through a cultural lens" (p. 200). The propositions are as follows:

1. The college experience, including a decision to leave college, is mediated through a student's cultural meaning-making system.
2. One's cultures of origin mediate the importance attached to attending college and earning a college degree.
3. Knowledge of a student's cultures of origin and the cultures of immersion is needed to understand a student's ability to successfully negotiate the institution's cultural milieu.
4. The probability of persistence is inversely related to the cultural distance between a student's culture(s) of origin and the cultures of immersion.
5. Students who traverse a long cultural distance must become acclimated to dominant cultures of immersion or join one or more enclaves<sup>3</sup>,
6. The amount of time a student spends in one's cultures of origin after matriculating is positively related to cultural stress and reduces the chances they will persist.
7. The likelihood a student will persist is related to the extensity and intensity

3 Kuh and Love (2004) define "enclaves" as: "a group or subculture that has values, attitudes, beliefs, and assumptions that are congenial with one's culture of origin(s)" (p. 205).

of one's sociocultural connections to the academic program and to affinity groups.

8. Students who belong to one or more enclaves in the cultures of immersion are more likely to persist, especially if group members value achievement and persistence (Kuh & Love, 2004, p. 201)

Institutions must be aware of the challenges faced by students and address the cultural changes they are requiring students to make. Kuh and Love, however, are still operating from a perspective of assimilation as their propositions reflect a need for the student to adapt to the dominant culture of their institution's environment, especially if an "enclave" is not available to the student (furthermore, the "enclave" that the student identifies with should value education and persistence; it may be difficult for a student to find such a group).

Tierney (2004), conversely, offers a model that views student departure "based on critical notions of power and community" (p. 213). Tierney asserts that Tinto's model is based on individualistic perspectives; his revision, on the other hand, utilizes "understandings of groups, power, and oppression" (p. 217). He provides a new lens for defining the term "dropout" as "those who are most often powerless and disabled by the culture in which they live and participate" (p. 217). The goal of Tierney's model is to provide students' with the cultural capital necessary to succeed in an educational system that often holds them back from persisting. Unlike assimilation models, Tierney proposes that students should not be required to leave their identity behind. Teranishi, Behringer, Grey, and Parker (2009) do not focus on retention theories specifically in their article; however, they support the use of critical race theory in studies involving Pacific Islanders. Therefore, Tierney's model would be the most suited to their perspective on appropriate frameworks.

### **Practical Implication for Tierney's Model**

Tierney (2004) uses the Neighborhood Academic Initiative (NAI) to demonstrate how his model can be implemented. NAI, a college preparatory program, recruits participants with a "C" average from low-income areas. Program leaders provide participants with positive reinforcement with regard to their academic pursuits. The participants, who are called scholars, must meet rigorous requirements and high standards; however, they are supported and encouraged academically. Program leadership from within the African American and Hispanic communities serve as role models, and the program focuses on "eradicating racist tendencies...in favor of an approach that accentuates pride, one's heritage and respect for others" (p. 229). Furthermore, the program deliberately involves family members and the community in order to perpetuate "the notion of cultural capital beyond merely the individual" (p. 228).

UH-Mānoa's College Opportunities Program reflects a similar mission in that it "recruits individuals who are...academically under-prepared, economically disadvantaged, represent a positive role model to communities underrepresented at the UHM, non-traditional, or in need of a structured college entry. Selected students who participate in, and meet the summer program requirements, gain admission to the UHM in the fall semester" (COP (2007)). The six-week summer program ensures that students gain the skills and knowledge necessary to succeed in the college classroom. Once students begin their first year, they receive holistic counseling, which encompasses issues from academics to financial aid (*COP 2010 Application*, COP, 2007).

### Social and Cultural Capital

The new approaches to retention that appear in Braxton's (2004) volume are added to by Pidgeon (2008), who furthers the work of Tierney (2004) by using research on Aboriginal students in Canada. Pidgeon critiques the educational system's valuing of non-indigenous perspectives. The current system is an obstacle for students whose perspectives may differ from those of the dominant culture and/or possess less cultural capital. Pidgeon calls for institutions to "validate Indigenous capital, epistemologies, and ultimately become site of change for students" (p. 353). Constituents from diverse backgrounds must become included into the fabric of the institution's curricular and co-curricular decision-making.

In her review of Native Hawaiian and Pacific Islander research, Benham (2006) came to the conclusion "that there is a need for a reaffirmation of indigenous knowledge, wisdom, and learning" (p. 40). The recent research reveals that successful models incorporate "building cultural identity (and multiple identities) and cultural capital by employing both culturally specific and pluralistic teaching approaches that build cultural competence and respect" (Benham, 2006, p. 40). Theoretical frameworks that include factors related to cultural and social capital are growing in studies of student retention. For low-income, first generation students retention can be influenced from before they even begin college through barriers of college access and choice.

Astin's (1970, 1991) input-environment-outcome (I-E-O) model demonstrates that "college outcomes" are related to their "inputs" (cited in Pascarella & Terenzini, 2005, p. 53). Outcomes can be both cognitive and behavioral (the latter commonly called affective). Astin (1993) summarizes this model: "*Inputs* refer to the characteristics of the student at the time of initial entry to the institution; *environment* refers to the various programs, policies, faculty, peers, and educational experiences to which the student is exposed; and *outcomes* refers to the student's characteristics *after* exposure to the environment" (p. 7). Background characteristics and experiences also affect a student's access and choice to what, if any, college environment a student be admitted. Furthermore, socioeconomic status as an input can affect college choice and access not only directly (Hearn, 1991), but also indirectly through the lack of social and cultural capital and the creation of poor signals sent to post-secondary education (Venzia & Kirst, 2005; Perna, 2000; McDonough, 1994).

An individual student's college access and choice is not easily determined by using socioeconomic status alone because other factors such as academic preparedness and culture also play a role in where, or if, a student decides to attend college. Hearn (1991) finds that of all characteristics, a student's academic ability had "the most powerful effect on entry into a selective institution" (Hearn, 1991, p. 164), making it seem that college choice is based on merit; however, his results also demonstrate that black students and those from a lower SES "were particularly likely to attend lower-selectivity institutions" (Hearn, 1991, p. 164). On the basis of gender, female students were more likely to attend a lower-selectivity college, even after controlling for other factors (Hearn, 1991). Teranishi et al. (2004) find that for Asian Pacific Americans socioeconomic status played a smaller role in college choice than other factors, such as living near home for Southeast Asians and Filipinos. The results from these few studies begin to demonstrate the complexity of parsing out the way in which socioeconomic status and race/ethnicity affect college access and choice.

Perna (2000), in her review of the literature, discusses the inconclusive nature of college access and choice. Her own results also point toward the important inclusion of several student characteristics in predicting where a student will attend college.

While academic ability was the largest contributor in predicting four-year college attendance for Whites, she finds that for African Americans and Hispanics, academic ability's inclusion in her model "was comparable to the contribution of social and cultural capital" (Perna, 2000, p. 133). While social and cultural capital are not comprised solely of a student's socioeconomic status, in definition, they are highly related (Perna, 2000). In her study, which looks specifically at students' decisions to enroll in a four-year college, she points out that those who attend two-year institutions "are more sensitive to changes in tuition and aid," and salaries for those who attain bachelor's degrees are higher than for those who earn an associate's degree or lower (Perna, 2000, p. 121). This is unfortunate considering those who are more likely to have concern about cost, have the most to gain financially from a college education.

An area that is more obviously affected by socioeconomic status is the ability of a student to purchase and have access to the proper resources that will enable them to send the correct signals to post-secondary institutions. One aspect of the system where inequalities exist between low and high income students is in the area of "college knowledge." Students from lower SES are not only less prepared for college academically, but they are less aware of the proper "signals" that they should be transmitting to college admissions offices. On the other hand, high SES students, like those in McDonough (1994) are using their purchasing power to pay private counselors who essentially "coach" them on exactly what signals they should exhibit.

Once a student does enter college, social and cultural capital continue to influence persistence. Wells' (2008) goal was to extend Berger's (2000) theoretical framework of persistence, which is based upon cultural capital, by including social capital. In particular, Wells sought to uncover how social and cultural capital influence persistence and how this may vary between different ethnic groups. Wells used a large national dataset in his quantitative analysis. His findings supported Berger (2000) in that social and cultural capital upon beginning college had a positive influence on the persistence of first year students. In particular, Wells found that "parental education and friend's college plans" were "associated with the greatest odds of persistence" (p. 121). He also found that "Hispanics, are, on average, equipped with the least amounts of traditionally-valued social and cultural capital on entry" (p. 122). Furthermore, when other factors are controlled for, Hispanics and Caucasians do not exhibit significant differences in retention. Due to these findings, Wells urges "policy makers and administrators" to not only focus "recruitment and retention efforts" on students with low levels of social and cultural capital, but also "recognize the stratifying effect that race and ethnicity may have in the broader degree attainment process" (p. 123).

Purswell, Yazedjian, and Toews (2008) used a framework which combined social capital with the Theory of Planned Behavior to uncover predictors of student academic behavior; they wanted to uncover whether or not "these predictors varied among students whose parents had no college experience, those who had at least one parent with some college experience, and those who had at least one parent with a bachelor's degree or higher" (p. 196). To answer these questions, they analyzed data from a previous longitudinal survey conducted at a single public institution located in Texas. Their final sample was made up of 329 students—the majority of which were Caucasian and female. Hispanics also made up a large number of the respondents, followed by a smaller number of African Americans. They found that "peer support was the only variable predictive of academic behavior for the students whose parents had some college experience, and intention was the only significant predictor for first-generation college students" (p. 191). The literature defines "intentions" as both long-term aspirations (degree attainment) and short-term goals (such as success on a future



quiz or exam) (Purswell et al., 2008). For this study, the authors used 9 questions, which focused on student's intentions to participate in "positive academic behaviors" such as finishing their work in a timely fashion and participating in class discussion<sup>4</sup> (p. 197). These results support Tinto's theory of student departure with regard to the influence of intention on student persistence. As with other studies, this research could be added to if replicated at multiple institutions, and when the large sample was divided into the three groups used in the analysis, the group of first generation college students was made up of only 44 students. The other groups were larger; therefore, the results for the first-generation students may be less generalizable than the findings for the other groups.

### Factors Influencing Student Retention

Now that the theoretical research has been reviewed, recent findings with regard to factors which influence retention will be reviewed. Parker (1998) described the findings of the New York State Department of Education's research determining the factors that hinder the persistence of minority students. The following obstacles were the most commonly identified by college administrators: "job and family responsibilities of students; location of colleges outside of minority concentrations; lack of minority faculty and administrative staff; lack of college funds for intervention programs<sup>5</sup>; inability to afford college; lack of appropriate social and cultural activities; and unsupportive surrounding communities." Many of these factors will be examined in this section. The review begins with a short background of Hawaiian student retention to place the review in context. Next, the review moves to the general research on academic factors, student satisfaction and attitudes, and social and family support.

### Background: Hawaiian Students

According to Benham's (2006) review of the literature, beyond native publications, the research on Native Hawaiians and Pacific Islanders is sparse. The existing research makes several disparaging conclusions. From available data on persistence<sup>6</sup>, Benham concludes: "Native Hawaiians and Pacific Islanders (and Filipinos) are among the most underserved with the lowest test scores, less than suitable high school graduation rates, disproportionately high rates of grade retention, and low rates of post-secondary enrollment" (p. 32). In fact, Native Hawaiian students are among the least likely to graduate from college (Kumashiro, 2006). The national average of bachelor's degree attainment is 24.4%; for Native Hawaiians, the average is 15.2% (College Board Advocacy & Policy Center, 2010). Furthermore, Kumashiro (2006) points out that "Native Hawaiians and other Pacific Islanders [are] living in poverty at almost one-and-a-half times the national average" (p. 131). Makuakane-Drechsel and Hagedorn (2000) point out the significance of financial aid for the Hawaiian population, as it was second in significance to GPA in predicting persistence for both liberal arts and vocational community college students in their longitudinal study. Beyond the academic factors that influence persistence of Native Hawaiian students identified by

<sup>4</sup> Their items were based on questions from Michigan State University's Freshman Assets Survey developed by Villarruel and Gardner. An online version of this instrument could not be located.

<sup>5</sup> Examples of "intervention programs" are courses that focus on study skills or tutoring/mentoring for academically underprepared students.

<sup>6</sup> Benham (2006) uses data from: Kao, G. & Thompson, J. S. (2003) Racial and ethnic stratification in educational achievement and attainment, *Annual Review of Sociology*, 29, 417–443; Office of Insular Affairs Statistical Website ([www.pacificweb.org](http://www.pacificweb.org), accessed 27 December 2004); Tibbets, K. A. (1999) Native Hawaiian educational assessment, 1999, Report No.99-00:9 (Honolulu, HI, Office of Program Evaluation and Planning, Kamehameha Schools); and Tibbets, K. A. (2002) Losing ground: longitudinal trends in Hawai'i DOE test scores for major ethnic groups, Policy Analysis & System Evaluation Report No. 2001-02:16 (Honolulu, HI, Policy Analysis & System Evaluation).

Hagedorn, Lester, Moon, and Tibbetts (2006), they also found that “socioeconomic status, college financial aid, and family support were significant factors in bachelor’s degree attainment for [students that began at the community college]” (p. 22). All of these factors were used in deciding which of the current research to review. Academic factors pervade the retention literature. Given the lack of academic preparedness cited for Hawaiian students, the literature exploring academic factors relating to retention are critical.

### Academic Factors

Makuakane-Drechsel and Hagedorn (2000) examine the “factors affecting the persistence and transfer of Hawaiian students enrolled in the four public community colleges on Oahu” (p. 641). They utilized longitudinal data on a 1991-1996 cohort of first-time students at Oahu’s community colleges to predict persistence—the data was from the UH Community College Tracking System and additional financial aid data. The final sample included 593 students who had identified their desire to pursue a liberal arts degree or vocational certificate. For the liberal arts students, significant variables that predicted persistence were “attending an urban high school, taking more credit hours, having a higher cumulative GPA, starting with credits from a four-year institution (reverse transfer), and receiving financial aid” (p. 649-50). For vocational students, financial aid, number of credit hours, and GPA were positively related to persistence, whereas “attending Campus 4 decreased their likelihood of persistence 20.2% over vocational–technical students at the reference campus” (p. 650). Liberal arts students at Campus 4, however, had an increased chance of persistence. Their results support the academic integration literature, and “policies to aid students to achieve academically and to enroll full time are encouraged” (p. 651). Furthermore, their results differ with previous literature on reverse transfer students.

Another study which explores the influence of academic factors on graduation rates of Native Hawaiian students is Hagedorn, Lester, Moon, and Tibbetts (2006). They used data from College Persistence, Transfer, and Success of Kamehameha Students Project (CP-TASKS), which researched “only Native Hawaiian students who graduated from high school in 1993, 1994, and 1995” (p. 22). They specifically sought to answer how many Native Hawaiian students obtain a four-year degree, how many Native Hawaiians who start at the community colleges transfer to a four-year institution, and “what are the predictors of bachelor’s degree acquisition among community college student starters” (p. 23). Their “logistic regression equation found that high school grade-point average [...was a] significant factor in bachelor’s degree attainment for the 2-year starters” (p. 22). They also found that students who graduated from Kamehameha were more likely begin at a four-year institution.

While the previous two studies focus specifically on Hawaiian student retention, the remainder of this section contains reviews of research which includes Caucasian, Hispanic, and African American student populations. However, given the importance of academic factors in the retention of Hawaiian students, these studies are relevant in that they explore the roles of academic performance and expectations in the persistence of college students.

Allen, Robbins, Casillas, and Oh (2008) studied the factors that influence third-year retention; their longitudinal study included almost 7,000 students from 23 different institutions, making their results very generalizable. Allen et al. measured “motivation, social connectedness, and academic performance constructs...at the beginning of the first year” (p. 648) using the Student Readiness Inventory. The Student Readiness Inventory includes ten areas: academic discipline, commitment to college, general determination, goal striving, academic self-confidence, study

skills, communication skills, social connection, social activity, and steadiness<sup>7</sup>. They “found that academic performance has large effects on likelihood of retention and transfer; academic self-discipline, pre-college academic performance, and pre-college educational development have indirect effects on retention and transfer” (p. 647). Furthermore, they found that the academic achievement of freshmen was influenced by academic self-discipline (giving it an indirect effect on persistence).

Kiser and Price (2008) studied the persistence of first year students by developing four predictive models based on a sample of 1,014 Caucasian, Hispanic, and African American students from Texas State University. The variables used in the model were: “letter grade in high school; first-year college GPA; residence location during the freshman year; cumulative hours earned during the freshman year; highest level of formal education obtained by the student’s father; highest level of education obtained by the student’s mother; and gender” (p. 426). Their conceptual framework was made up of theories from Tinto, Bean, and Astin; they used results from the Cooperative Institutional Research Program (CIRP) Freshmen Survey<sup>8</sup>. For the model that was made up of Caucasian students only and the model made up of Hispanic students only, they found that “cumulative hours earned during the freshman year of college” was a statistically significant predictor of college persistence (p. 431-2). This predictor was also significant for their model that included all students, but not the model which included African Americans only. Adding variables to the model and extending the study to different groups of students could add to the findings of this study.

Friedman and Mandel (2009) used a predictive model to determine factors that influence retention of first-year college students. They administered the Student Motivation Questionnaire (SMQ)<sup>9</sup> to incoming students at a public university in New York. Their response rate was a respectable 43%, and the final sample size was 583. Their results were reflective of previous studies that demonstrate that high school GPA and SAT scores predict retention. Furthermore, they found that “student academic performance expectancies provide additional prediction of end of first semester cumulative GPA” (p. 240). The value students placed on obtaining good grades and “effort to obtain good grades added to predictive value of retention” (p. 240). However, unlike previous research, Friedman and Mandel did not find social motivators to be predictive of retention. They speculate it is either due to the characteristics of the sample, questions used, or “response bias in the sample” (p. 240). Caucasian students responded at higher rates than minorities, and the survey was voluntary; this limits the generalizability of these findings.

### **Academic Engagement**

Two recent studies explored the influence of academic engagement activities, such as undergraduate research on student persistence. These activities were found to have a positive influence on retention. Townsend and Wilson (2009) also used Tinto’s theory in their qualitative study of 12 transfer students. Their purpose was to test the fit of the theory for students who had transferred from community college to a four-year university. Townsend and Wilson found that there were differences between traditional students and those in their study. Their participants’ social and academic integration were affected most by “university size, the opportunity to join clubs in their major, and the opportunity to conduct research with a professor” (p. 405). Students attributed several factors to their academic persistence, which included being able to take classes in their majors when they transferred. These classes were smaller and more personal than general education classes; furthermore, working with

7 The instrument is available at <http://www.act.org/sri/studentguide/toolshop.html>.

8 Available at <http://www.heri.ucla.edu/cirpoverview.php>.

9 The items examined by the questionnaire are listed in Friedman and Mandel (2009).



professors in their field through research and joining major-focused organizations also saw these activities as important to academic and social integration, respectively. The sample of this study was predominately white and more than half were male. While the study's participants were not ethnically diverse, the researchers did use longitudinal interview data that they triangulated. It should also be noted that they found no emergent themes based on gender.

Jones, Bartlow, and Villarejo's (2010) results from a longitudinal study of students from the University of California-Davis provide data that participation in undergraduate research increases persistence for minority biology majors. They use Tinto's theoretical concepts of academic integration in their framework, and their final sample included 6,834 students. Their results were derived from quantitative data and undergraduate research was a significant variable influencing retention, even when other factors were controlled for. Jones et al. conclude that "research participation may particularly help prepare underrepresented minorities for graduate education and careers in the sciences, while providing a form of institutional integration into a competitive major at a large university" (p. 106). They also suggest that students begin research early and continue participating throughout their time in college, as the amount of time spent doing undergraduate research is related to increased levels of academic integration which leads to persistence. However, they found that even one semester of research was related to persistence.

While no recent studies that explore the relationship between engagement in cultural activities and retention could be found, Kuh, Kinzie, Shuh, and Whitt (2005) write that encouraging participation in cultural activities and "contact among students from different economic, social, and racial or ethnic backgrounds" (p. 219) are practices utilized by institutions which demonstrate high levels of student engagement and graduation rates. They do not make a direct correlation; however, they do describe these successful institutions as valuing diversity and placing importance on it throughout the college experience both inside and outside of the classroom. Furthermore, another study, Lundberg (2007) linked greater levels of learning for Native American students who attended institutions with a deep commitment to diversity; while the study did not explore persistence, this increased learning could indirectly influence retention (as academic achievement influences persistence).

### **Satisfaction and Attitudes**

Allen, Robbins, Casillas, and Oh (2008) found academic factors influenced retention of third-year students in their study; however, they also uncovered that "college commitment and social connectedness have direct effects on retention" (p. 647). Student satisfaction and student attitudes was another prevalent theme of the retention literature.

Orsuwan and Cole (2007) add to the very limited research on Asian American/Pacific Islanders in their study of student satisfaction. Furthermore, they disaggregate the data within this group, instead of treating AAPI students as a uniform group who have successful college attendance and persistence rates. This is in accordance with Yeh (2004) who demonstrated the importance of disaggregating data on Asian Americans; her research shows that certain subgroups within the Asian Pacific Islander population have "very low college attendance and persistence rates" (p. 81).

Orsuwan and Cole use Tinto's integration theory as well as models of "sense of belonging" and Kanter's opportunity structures in their theoretical framework. They argue that "Tinto's academic integration alone may not sufficiently explain the college experience or satisfaction of ethnic minority students because the extent to

which they integrate within a campus environment may be different from the racial majority students' extent" (p. 66). They used data previously collected from over 600 students: 24% Japanese, 9% Chinese, 16% Filipino, 17% White, and 9 % Hawaiian. The sample was also 60% female, and a majority of students had at least one parent with some college experience. The participants completed the Community College Student Experience Questionnaire (CCSEQ)<sup>10</sup>, which measured variables of student satisfaction.

Orsuwan and Cole's data analysis uncovered that "college processes such as academic integration, opportunity structures<sup>11</sup> and sense of belonging were positively and significantly associated with educational satisfaction" (p. 61). Furthermore, their second finding was that "race/ethnicity has no direct effect on students' experiences but is more dynamic than when race/ethnicity interacts with college processes" (p. 61). This may seem to indicate a lack of importance of race and ethnicity on students' experiences; however, there were interactions in the model, which demonstrate the influence of race/ethnicity. An interaction between race/ethnicity and academic integration led to differences in satisfaction, for example. Household income, parental education, and within-college processes were also factors that interacted with race/ethnicity. Important for this literature review is the interaction between being Hawaiian and household income. Hawaiian students "especially from low-income and low-parental-education backgrounds, may be less satisfied with their educational experience as they try to navigate a system of which they know little (p. 81). As with other studies in this review, the expansion of this study to more than one institution, and the inclusion of students from four-year universities could strengthen the findings. While they offer no recommendations, they do reiterate the importance of cultural capital for Hawaiian students' satisfaction.

Nes, Evans, Segerstrom (2009) hypothesized that students' optimistic disposition would be predictive of academic persistence. They surveyed 2,189 students at the University of Kentucky—once at the beginning of their first year and again at the end of their first year. Their sample was 93% white and almost 60% female. While their initial sample was larger, only 480 students completed both surveys. They found that "dispositional and academic optimism were associated with less chance of dropping out of college, as well as better motivation and adjustment" (p. 1887). Their results also revealed that "academic optimism was also associated with higher grade point average" (p. 1887). They conclude that self-efficacy could be influencing academic optimism, and that with a "belief in a positive outcome, students can succeed in the academic world, regardless of whether or not they are optimists" (p. 1908). Since dispositional optimism has been viewed as characteristic trait that does not change, the practical implications support programs that help to indirectly influence optimism through increasing a student's self-efficacy. Furthermore, they cite that Segerstrom found that increasing a student's "resources could possibly induce changes in optimism over time" (cited in Nes et al., 2009, p. 1908).

<sup>10</sup> Available from Lehman, P.W. (1992). CCSEQ: Test Manual and Comparative Data. Community College Student Experiences Questionnaire.

<sup>11</sup> Based on Kanter's (1977) "Opportunity Structures" which describes how college students who make up the ethnic/racial minority on a campus are only able to integrate as much as the institution provides opportunities for them to do so. Orsuwan and Cole write "those students who have a significant amount of opportunity tend to be satisfied with their institution, have high aspirations, have high self esteem, and be optimistic with the economic or social payoff. The structure of opportunity is determined by various factors including the following: the degree of one's aspiration, self esteem or self-rating of one's confidence, commitment to the organization, intrinsic aspects such as one's potential for learning, and access to growth in skills and rewards" (p. 67).

### **Social Support and Family**

Retention rates for Native American students are predicted at 7-25%; the national average is 50% (Larimore & McClellan, 2005). According to Larimore and McClellan's review of the literature (2005), "support from family, supportive staff and faculty, institutional commitment, personal commitment, and connections to homeland and culture" (p. 19) are factors that influence the persistence of Native American students in higher education. Benham (2006) came to the conclusion that current models that are successful at increasing academic achievement and persistence of Native Hawaiians and Pacific Islanders include "individualized instruction within a collective community of learners setting" (p. 40); this emphasizes the importance of the social aspects relevant to persistence for the Hawaiian population. Benham (2006) encourages more research to expound on what these models should incorporate, she describes the utilization of senior members or the community, "cultural experts and native speakers" working with instructors and learners throughout the "learning process" (p. 39-40), as well as curriculum that "builds cultural identity" (p. 40) and is "inclusive of home/family, school community, and broader communities (including the natural environment" (p. 40). Kawakami (1999) states that for Hawaiians "learning is situated, located in a specific place...a view of connections across time...and relationships with family members" (p. 26). Furthermore, themes from surveys of Hawaiian educators indicated that "successful learning experiences for Hawaiian students must take place in a culturally authentic physical and social learning environment" (Kawakami, 1999, p. 26). Mantle-Bromley, Wilson, Foster, and Maaka (2003) emphasize the importance of context, community, and reciprocal learning in the preparation of teachers who will work with Native Hawaiian students.

The research of Rousey and Longie (2001) supports the literature identified by Larimore and McClellan (2005). Rousey and Longie (2001) conducted an ethnographic study of multiple stakeholders of Cankdeska Cikana Community College. The goal of their study was to uncover, in light of the low persistence rates of Native American students, what tribal colleges are doing to help their students achieve success. The researchers describe the tribal college as "a family support system." Tribal colleges provide this support system through providing holistic social services, the inclusion of Native American culture in all facets of the college, and the opportunity for "many individuals to pursue their education while remaining on the reservation in the context of a strong family network available for social support" (p. 1500). But, they caution that these results are simplistic in light of the rich data they collected. They see deep value in the fact that tribal colleges ease the transition to college by not only "providing intensive academic support" (p. 1502), but also the inclusion of students' culture into the academic environment (as also found by Larimore and McClellan, 2005). Geographic location also allow for easy social integration.

Austin (2006) implemented a qualitative study of non-traditional female transfer students at a four-year institution. The women in the study are all a part of a scholarship program, which contains a mentoring component. Austin uses Tinto as a framework as well as previous transfer retention literature which states common barriers for transfer student persistence such as adapting to a different and less supportive academic environment, cultural differences with the institution, and dealing with decrease in GPA after transferring (p. 276). The seven women in the study had an average age of 35 years, and all but one had at least one child. Staff members working with the scholarship program were also included in the data collection. Austin found that "financial aid, academic counseling, orientation, mentoring, and peer support meetings can aid social and academic integration of

non-traditional women from small community colleges to large universities” (p. 287). These elements aid in creating a supportive atmosphere at institutions that can seem very impersonal and bureaucratic. While the sample size is small, including administrators of the program to help triangulate the data and using a semi-structured interview that helped themes emerge from the students’ stories should help make the results transferable to students of similar background and institutional type.

Nicpon, Huser, Blanks, Sollenberger, Befort, and Kurpis (2006) used Tinto’s theory of student departure to “investigate the relationship of loneliness, social support, and living arrangements with academic persistence decisions of 401 college freshmen” (p. 345). They administered a series of instruments to the students including the Revised UCLA Loneliness Scale<sup>12</sup>, The Perceived Social Support Inventory<sup>13</sup>, and the Persistence/Voluntary Dropout Decisions Scale<sup>14</sup>. Their findings demonstrated that the female and male participants varied; the largest difference was that “women perceived more social support from friends and family than did men” (p. 354). They also found that even though higher levels of support from peers did relate to “less loneliness and more academic persistence decisions” (p. 354), peer support was not connected to academic achievement. The study also sought to reveal whether living on or off-campus made a difference with regard to persistence. The most significant difference found was that those who lived on campus earned higher GPAs. Overall, Nicpon et al. found that Tinto’s concepts of social integration were supported by the findings and that social support is linked with persistence. The overall sample size of this study is large, and the researchers used reliable instruments to conduct their research; however, it must be noted that the participants are from a single institution and almost 79% Caucasian.

Harris (2006) studied the effects of the cohort program of Fresno State University’s Management and Organizational Development Program, which is “a 57-week degree completion program designed for working professionals who have a minimum of 7 years previous work experience” (p. 88). Harris surveyed a sample of 39 of the 1000 program participants to explore elements of the curriculum. He found that students “express[ed] that creating a sense of community in their cohort setting significantly helped them obtain their degree” (p. 99). These findings supported previous adult learning research that states adult students benefit from peer relationships with other adult students. Harris concludes that almost half of the 20% of students who drop out of the program do so near the beginning of the program before they are able to benefit from the community built within the cohorts. While other research linked the use of cohorts with persistence, research does demonstrate that learning communities are linked with retention (Tinto, 2004). Learning communities utilize a cohort system where students take several courses together and are “responsible to each other in the process of gaining knowledge” (Tinto, 2004, p. 84). Participation in learning communities were found to relate to academic and social integration, and student perception of these communities has been positive (Tinto, 2004).

Dixon Rayle and Chung (2007) used Schlossberg’s theory of college students mattering to uncover relationships between gender, mattering, support, and stress. The authors use Schlossberg’s definition of mattering, which is described as “the experience of others depending on us, being interested in us, and being concerned with our fate” (Dixon Rayle & Chung, 2007, p. 22). The participants were 533 first-year students recruited from education courses. Sixty-eight percent of the sample was female, and 75% were Caucasian. Students completed the following instruments:

12 A version can be found at <http://my.ilstu.edu/~jkhahn/psy442/ucla.pdf>.

13 A version can be found at <http://www.yorku.ca/rokada/psycstest/socsupp.pdf>.

14 From Pascarella, E., & Terenzini, P. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *Journal of Higher Education*, 51(1), pp. 60-75.

Perceived Social Support Inventory (both Friend and Family scales)<sup>15</sup>, Daily Hassles Index for College Stress<sup>16</sup>, and Interpersonal and General Mattering Assessment<sup>17</sup>. Their results indicated a relationship between perceptions of social support from family and friends with mattering to college friends. Furthermore, the only indicator of perceptions of mattering to the college was perceptions of social support from college friends. These findings seemed to echo the findings of Nicpon et al. (2006) if one links mattering to the college environment to persistence (as Nicpon et al. found that feelings of social support from peers led to persistence). Furthermore, like Nicpon et al., they found that their female participants perceived higher levels of support. However, the females in Dixon Rayle and Chung's study also reported higher levels of stress. Dixon Rayle and Chung did uncover that mattering and social support were also predictors of coping well with stress, which should aid with the female participants' persistence decisions.

Duggan and Pickering (2008) sought to uncover whether or not non-cognitive factors that are used to predict the persistence and academic success of traditional students can be applied to transfers. Their 369 participants completed their Transfer Student Survey (TSS)<sup>18</sup>; all participants were students at the same doctoral university. For freshmen, the most common barriers were: "need to balance employment with classes, dissimilarity with students' self-ratings of abilities and traits when compared with performance, incongruence between attitudes and behavior, academic integration, and reasons for transfer" (p. 448). For sophomores, work-school balance was also an issue as well as "the opportunity to work and attend class part- or full-time...financial aid...communication skills and socializing...confidence...[and] academic barriers" (p. 452). Juniors and seniors survey responses reflected "self ratings of abilities and traits...academic and social integration...[and] confidence" (p. 453) as the most prevalent barriers to their academic achievement and persistence. A common prevalent theme of all students was the need to successfully balance their life, work, and school commitments successfully.

Guillory and Wolverton (2008) used a case study approach to study how perceptions of barriers to degree obtainment of Native American students varied with those of the legislature and university administration. Their sample was made up of students from four-year universities in three different states, and their framework consisted of retention theories. They uncovered differences between the students' views and the members of the university administration: "Institution representatives placed a high premium on financial factors. In their view, financial support drives or motivates Native Americans to persist through college completion" (p. 80). However, the "students suggested that family and tribal community provide the determination and desire to finish. This emphasis on family and tribal community reflects the communal culture from which these Indian students come" (p. 80). While some students in the study discuss financial hardships, it was not the most emphasized theme. The students identified social family, giving back to the tribal community,

15 Available from Procidano, M.E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology*, 11, pp.

16 Available from Schafer, W. (1987). *Stress management for wellness*. New York: Holt, Rinehart, and Winston, Inc. (an updated scale was published in 1992)

17 Based on the "Mattering to Others Scale"—available as an appendix to Marshall, S.K. (2001). Do I matter?: Construct validation of adolescents' perceived mattering to parents and friends. *Journal of Adolescence*, 24, 473-490; and, the "General Mattering Scale," based on a paper presentation: Marcus (1991). Mattering: Its measurement and theoretical significance for social psychology. psychology. Presented at the annual meeting of the Eastern Sociological Association, Cincinnati, OH. The five items on this questionnaire can be found in Dixon Rayle, A. (2005). Adolescent gender differences in mattering and wellness. *Journal of Adolescence*, 28, p. 758.

18 This survey is based on the original survey in Pickering, J.W., Calliotte, J.A., & McAuliffe, G.J. (1992). The effect of noncognitive factors on college performance and retention. *Journal of the Freshman Year*, 4(2), 7-28. The areas covered by Duggan and Pickering (2008) are found in their article on page 441.



and social support as the three most important factors in helping them persist. Native American students listed single parenthood as their number two barrier (second to academic preparedness). The researchers recommended the use of the Family Education Model when working with Native American students: “the use of a family specialist could assist student-parents in obtaining child care information and provide family-life skills training—helping to deal with the tremendous pressure of being student-parents, even assisting with family problems back home. The essence of the FEM is to create a family-like environment for Native American students by making family and tribal members an integral component of the educational process of these students” (p. 83-4). This finding could be relevant in working with Native Hawaiian students who are single parents. Research shows that the income of single-parent Native Hawaiian households fall below the national averages. Single-parent Native Hawaiian households were “four times more likely to fall below the poverty line” with “36.7 percent [falling] below the poverty line” (Kana‘iaupuni, Malone, & Ishibashi, 2005, p. 8). Therefore, single-parenthood not only adds time constraints and responsibilities that can take away from academic commitment, but also has an impact on financial resources, which have been cited throughout the literature as a barrier to persistence.

Sy and Brittain (2008) studied how family obligations related to the decisions of young women transitioning from high school to college. In particular, they explored the decisions of how much to work and where to live. They used ecological systems theory as their guiding framework: “ecological systems theory...suggests that multiple settings influence an individual’s development, and that these settings interact and change over time” (p. 730). Their participants were 296 Latina, Asian American, and Caucasian women from a single four-year institution in California. Participants completed an online survey which measured levels of familial obligation and students living and work plans. Their results indicated that Latina students reported more often fulfilling family obligations than did European American students (p. 735).

Furthermore, they “found no differences between Asian American and European American students” (p. 735) with regard to level of family obligations. However, Asian American women in the study described “that the fulfillment of family obligations would negatively predict the number of hours students plan to work in their first college semester” (p. 735). And, Caucasian women in the sample were the only to report that family obligations would influence their residence plans. The researchers do state that at the institution where participants attend, “on-campus living options are somewhat limited, it may be that living at home is a more realistic option” (p. 737). The researchers did control for parental income; however, results should be used with caution as this was a study from a single institution. Furthermore, there is always the risk of self-selection in survey research. While a 29% response rate is acceptable, it does not offer as significant results as a higher response rate.

### Programs and Practical Implications

Much of the retention literature focused on the assessment of current retention programs. Many of the programs were formed to assist students who had been labeled “at-risk” for various reasons. An overwhelming amount of the retention literature described the use of mentoring to aid in college student retention; therefore, the final section of this literature review will provide a summary of the mentoring literature as it relates to persistence. Furthermore, the mentoring literature can be used to enhance counseling services through integrating the successful components of mentoring into counseling appointments and programs. Counselors can serve as

mentors to students, or train peer mentors to effectively advise students from a point of view with which they can directly relate.

### Interventions for Students in Academic Trouble

Parker (1998) lists the “identification of ‘at risk’ students before they encounter serious academic problems” as one of the most cited activities that influence student retention. While many factors could cause a student to be labeled “at risk,” this section of the literature review included studies that look at programs specifically created to assist students who had various identified barriers to academic success and persistence.

No studies on post-secondary at-risk Hawaiian students were found. However, Yamauchi (2003) describes the key elements of The Wai‘anae High School Hawaiian Studies Program (HSP)...a community-based, culturally contextualized program for students at a high school serving a predominantly Native Hawaiian and low-income community” (p. 379). The program has positively influenced student outcomes including high school persistence, attendance, intention to obtain a bachelor’s degree, and increased GPA. The components of the program that Yamauchi identifies are: contextualization of the curriculum within the students’ culture and background (includes community fieldwork, collaborations between the school and community, “detracking of students” (p. 386), and having instructors teach in teams and remain with the same students through multiple grade levels (“looping”). The core elements of this program could be applied to the higher education setting.

A program that was developed specifically for students transitioning to college is the Silas Craft Collegians program at Howard Community College in Maryland, which identifies academically at-risk students their senior year of high school (Pluviose, 2008). Students begin the three-year program with a summer retreat after they graduate high school. During the retreat they meet professors and learn skills that will assist them in succeeding in college. The first year of the program is spent on developmental coursework. The other services they benefit from include “having a personal advisor and a host of tutoring and counseling services, and they attend a study session and seminar on a weekly basis” (Pluviose, 2008). The retention rate for students in the program is an impressive 71%, compared with only 60% for the rest of the student population. Students in the program attribute the caring and supportive atmosphere of the program’s professors in helping them persist. The program boasts taking a “family approach” to assist students. One professor describes the need for showing the students support and he labels his method as “confrontational, but with compassion” (Pluviose, 2008).

Berkowitz and O’Quin (2006) used archival data that spanned over a ten year period to determine the factors that predicted graduation for students who had “stopped out<sup>19</sup>” and then later returned to college. Their sample was 48% African American, almost 28% Caucasian, and 15% Hispanic; their sample was originally made up of 399 students who had been admitted to the university through their Equal Opportunity Program (EOP). The final sample was made up of 290 students who did return to the university. For the demographic variables, age was a significant predictor of persistence—the younger students were more likely to graduate. For other factors, students who had previously been dismissed were less likely to persist. A positive predictor of graduation was participation in a summer orientation program. This orientation was a part of the EOP, and consisted of at least three weeks of residential academic and social preparation for college including remediation, study skills, and counseling. They also found that the number of semesters and

19 Students who “stop out” leave college, but return later.

credits a student completed after readmission “were significantly positively related to graduation” (p. 199). Finally, they found a significant relationship between requesting a complete withdrawal before stopping out and persistence—students with a complete withdraw were less likely to graduate. The researchers speculate that the need for a withdrawal could be indicative of “the seriousness of the problems facing the students” (p. 210). A very positive finding was that the students who were readmitted after stopping out had similar graduation rates to the national average. The longitudinal nature of this archival study makes it very reliable; however, inclusion of more than one institution in the analysis could increase the validity of the findings.

Lowis and Castely (2008) studied the influence of an intervention strategy on identified at-risk students. They first assessed students to predict those who may have “poor first-year student progression and achievement (SPA)” (p. 333). They then used a series of interviews to intervene with students who scored low on the assessment<sup>20</sup>. Significant conclusions from the survey and subsequent interviews were that “New students desire more contact time with tutors, and re-assurances, than they receive at present” (p. 342). Further conclusions included the usefulness of interviewing identified at-risk students: “The interviews yielded many comments from students about their first-year experiences, both good and bad, that can be drawn upon to help with the planning process for subsequent academic years” (p. 343). While the initial sample of students who took the questionnaire was quite large (almost 250 students); the participants were only psychology majors from a single institution. Furthermore, the intervention sample was made up of only 15 students; however, they were interviewed three times, which helps with the triangulation of the qualitative data.

Kreysa (2006) used Tinto’s theory as the framework for a study on the influence that remediation has on persistence. The sample consisted of 438 first-time freshmen separated into those who took remedial coursework and those who did not. The sampling was random, which does increase the reliability of the results. Kreysa found “no difference between the graduation and retention rates of remedial and non-remedial students” (p. 262). For all students in the study, GPA was positively related to persistence. Kreysa points out that student satisfaction has been found to be positively related to GPA, which can explain the connections with persistence. Furthermore, for non-remedial students only, deciding on a major influenced persistence; for remedial students, “changing majors was an important predictor of graduation” (p. 263). Kreysa hypothesizes that this stems from a remedial student being “enlightened” with options when they come to college, as opposed to non-remedial students who may more often change majors for negative reasons (p. 263). Finally, as with other studies, Kreysa “found that students who were in greater financial need were less likely to graduate” (p. 264).

Isaak, Graves, and Mayers (2006) compared the responses of students who were on academic probation with those who were not to uncover the factors that hindered the probationary students’ success. They administered a checklist of problems to 150 probationary students in a special program and 153 students who were not in the program or on probation. They found that students on probation “identified more motivational and stress-related...problems than did regularly matriculated students” (p. 171). This finding supports previous work, which discusses the influence of students’ ability to cope with stress on persistence (Bean & Eaton, 2001).

The probationary students in the study also completed a Survey of Study Habits and Attitudes (SSHA)<sup>21</sup> and scored below the 50th percentile. However, they did not

<sup>20</sup> See [APPENDIX C](#) for questions used in the assessment.

<sup>21</sup> Brown, W. F., & Holtzman, W.H. (1967). SSHA manual: Survey of study habits and attitudes. New York: Psychological Corporation.

identify more study skills problems on the checklist than the regularly matriculated students. However, the lack of identification of study skills problems by probationary students led Isaak et al. to conclude that either the checklist did not capture the appropriate problems the students faced, or that the probationary students lacked self-awareness of their poor study habits. They use previous research to support this finding as it has been noted that stronger students have a higher ability to judge their own abilities. A limitation of this study is that the researchers did not administer the SSHA to the non-probationary students. Isaak et al. recommend that holistic development, which focuses on motivational and coping skills, be included with academic planning.

Richie and Hargrove (2005) measured the effectiveness of an intervention to prevent student absences at a single-institution in the South. The intervention was comprised of telephone calls to students enrolled in a freshmen English course who had excessive absences. Seventy-one students were given the intervention phone calls, while 44 did not. They found that the students who received the telephone calls missed class less and received higher grades in the course. They then recreated the experiment with the addition of an end-of-semester survey for the intervention group (the second intervention group was made of 77 students, while the non-intervention group was made up 72 students). The results from this experiment were similar to those from the first experiment; however, they also uncovered that more students from the intervention group were retained the following semester. Inclusion of students from multiple-institutions and different class standings could add to the results of this study. This finding supports Kirk-Kuwaye and Nishida's (2001) results that indicated that high levels of advisor involvement decreased the likelihood of student being suspended or dismissed. However, their interventions not only included reminder phone calls, but also face-to-face meetings and academic skill-building sessions; their results demonstrated positive correlation between the number of interventions utilized and a student's academic success.

Diemer, Wang, and Smith (2010), in their study of vocational interests of marginalized youth, found that their model was "most predictive of interest-prospective major congruence for" the Asian/Hawaiian/Pacific Islander students in their study (p. 105). Diemer et al. conclude that instruments that assess interests can be very helpful in identifying institutional fit and major for marginalized youth. They state that "practitioners could help high school students link current vocational interests to majors" in order to assist them with choosing "satisfactory college majors" (p. 106).

A study by Folsom, Peterson, Reardon, and Mann (2005) support that career exploration is a useful tool for college students as well. They analyzed archival data from over 500 students who took a career planning course a four-year institution in the South. The participants took the class between 1989-1993 and received a B- or higher in the class. No statistical significance was found with regard to graduation rates between students who took the class and those who did not. The researchers did find a small, but statistically significant difference with regard to withdrawals and credits taken: "course participants took significantly fewer credit hours to graduate and executed significantly fewer course withdrawals than non-participants" (p. 466). The researchers did control for several variables such as high school GPA, income, and race; however, the students who did take the course could have varied from non-participants for other reasons. The use of longitudinal data helps make the results more generalizable, but caution should be given with regard to selection bias.

### **Native American Student-Focused Program**

Due to the low retention rates of Native American Students at the University of New Mexico, a pilot program, the Native American Studies Retention/Intervention Project (NASRI), was funded by the State Legislature between 1990-1996. The program was created to “identify academic problem areas for Native students and assist them in solving those problems; provide computer literacy and reference training; conduct research, publish findings, and hold education, curricular, and policy symposia” (Belgrade & LoRé, 2007, p. 170). Belgrade and LoRé (2007) used Tinto’s theory in their mixed methods study, which focused on the success of students who participated in the program. They selected a convenience sample (due to the mobility of former students) of 200 students of which 183 completed their qualitative telephone questionnaire. They found no statistically significant differences between the participants in the study based on participation in the NASRI with regard to self-ratings of academic preparedness—both groups felt they lacked appropriate academic preparation for college. However, NASRI participants did attempt and complete more credits. While the program had various student services offerings, participants “did not use the academic advisement component” (p. 186). Lack of information was cited as a cause for students not using the advising portion of NASRI. Participants did, however, rate the computer facility and academic symposia components of the program very favorably. The researchers conclude that “while the university can help retain students with various programs, unless these programs help bridge an understanding between value systems, then these programs will not necessarily succeed” (p. 187). They attribute this conclusion to the value Native American students place on family and community—commitments that take precedence over “infidel needs” (p. 187).

### **Extended Orientation**

The University of South Alabama’s (South) Entering Students at South Engaging in New College Experiences (ESSENCE) program was created to address retention issues at the institution. South’s student population is 83% white, and many of the students are first generation college students from low-income backgrounds. The program is for first-year students and administered through the Office of Students Affairs. The program includes several components—residents live together in the same dorm and participate in a Freshman Seminar, which focuses on college academic and social skills (time management, studying, etc.). There is also an academic advising and counseling portion tied with the seminar. The residential component also includes trained peer advisors for each floor of the residence halls. Noble, Flynn, Lee, and Hilton (2007) studied the effectiveness of the program by measuring GPA and graduation rates. They found that students who participated in the program had “increases [in] first-year GPAs and better odds of successful graduation in four years” (p. 55). Furthermore, while minority students in the study had lower GPAs, when ACT score was controlled for in the model, the minority students in the ESSENCE program were as likely to graduate from South as the white students. While part of the effects of the program is indirect through the effect of GPA, the program itself did have some direct effects on retention. Lastly, they conclude some direct effects of being female on higher graduation rates (though most of the effect was indirect through GPA).

### **Mentoring**

An overwhelming amount of the retention literature—whether empirical studies, theoretical, or anecdotal—focused on the successfulness of mentoring to address issues of student retention. For example, one of the successful components of Florida



State University's CARE program is a peer mentoring program which pairs students in their summer bridge program with current students who help them feel more comfortable and informed about the college environment (Richardson & Hudson, 2008). Nemko (2008) suggests in her article "Easy Ways to Improve a College's Retention Rate" that institutions "assign every freshman to a peer mentor who is a successful junior, so the freshman has a mentor for at least the first two years." In their qualitative study of biracial students, Sands and Schuh (2007) recommend institutions incorporate support services, including mentoring programs, to assist the biracial student population to integrate academically and socially into the college environment. Lyndon College, whose student body is comprised of over 60% first generation, and over 30% first generation and low-income students, included a mentoring component in their grant-funded approach to increasing retention for the latter group (Dalton, Moore, & Whittaker, 2009). One of the recommendations made by Landry (2002) to address the retention of women and students of color is the development of faculty-student mentoring programs to assist students in connecting with their college campuses<sup>22</sup>. She uses several examples to support the use of supportive relationships to increase student persistence. In Austin's (2006) study of a successful scholarship program, data emerges that identifies peer mentors and monthly luncheons with fellow scholarship recipients as a means for "enhancing the students' social connectedness" (p. 288).

In their review of the literature, Nora and Crisp (2008) state that, overall, the educational research has linked mentoring with persistence. Many of these mentoring studies are based on faculty-student or student-student mentoring relationships, which help students feel more comfortable in the college setting. With regard to minority students, the studies they discussed in their article demonstrated higher academic achievement for students with mentors. Nora and Crisp conducted a survey of 200 students from a two-year college in order to uncover students' perceptions of their mentoring relationships; however, these students were not a part of any specific program (for example, the mentor could be "a parent, faculty, counselor, spouse, or friend" p. 344). They found three statistically significant aspects of mentoring relationships: "educational/career goal setting and appraisal," "emotional and psychological support," and "academic subject knowledge support aimed at advancing a student's knowledge relevant to their chosen field" (p. 349). As mentoring programs often lack a proper framework or mentee training, these factors, which have been grounded in the literature and tested with participants, should be included into a mentoring program to increase retention. It should be noted that the study's sample was almost 75% female and 60.5% white. Furthermore, while their study could have been improved by including students from more than one institution, the sample size of 200 students should provide generalizable results for students from similar backgrounds. The next section will discuss details of programs discussed in the literature.

### **Specific Programs**

The Washington Education Foundation awards Achievers scholarships to 500 students annually (Hilberg, 2009). To qualify for the scholarships, students must be from one of the 16 lowest-income high schools in Washington State (Hilberg, 2009). Not only do the students in the program receive financial assistance, but they are also "encouraged and assisted academically" (Hilberg, 2009, p. 451). Additionally, students in the program receive help with financial aid literacy and "the college application process" (Hilberg, 2009, p. 451). Recipients are chosen, not based on

<sup>22</sup> Other recommendations include: curricular changes that reflect the "experiences of minorities and women" (p. 9), multicultural centers, women's centers, and summer transition/orientation programs.

GPA or achievement tests, but on “positive self concept, ability to select long-term goals, community involvement, and communication skills” (Hilberg, 2009, p. 459).

Hilberg (2009) identified eight students from the initial year of the program to participate in life history interviews. Furthermore, focus groups were conducted with participants from seven institutions. The two most significant findings from the study were with regard to “the significant role played by mentors in helping students obtain assistance and perseverance in times of crisis” (p. 461), and “the sense of personal worth that resulted from receiving the scholarship and being named an Achiever Scholar” (p. 461). Program participants identified the program mentors as important in helping them overcome obstacles. Mentors “did not limit their assistance to academics” (p. 461), but were available to students for a variety of problems they faced as college students. Some students revealed that the mentoring component of the program was not being administered equally across campuses—one student was not even aware he had a mentor. Therefore, a need for consistency among mentors and training is highlighted as a way to combat this problem.

Longwell-Grice and Longwell-Grice (2008) conducted a series of interviews in their case study of four first generation, working class students. The goal of their study was to test Tinto’s theory for the participants in the study. They found that their participants were intimidated by faculty and afraid to interact with them. Furthermore, “the interviews showed young men struggling to negotiate both family and institutional expectations and past and future academic success” (p. 416)<sup>23</sup>. While the participants were able to achieve academic success and gain entrance to college, they “lacked the cultural capital” to approach “the educators they saw as gatekeepers” (p. 416). The importance placed on faculty members’ relationships with students is in accordance to both Tinto’s model and Kuh et al. (2005). Longwell-Grice and Longwell-Grice recommend the use of supportive mentors to assist first generation, working class students. While data were triangulated, the small sample size does influence the results of this study. However, the results do reflect previous findings with regard to first generation, low-income students. While no peer-reviewed studies that explore the role of a third-party in organizing faculty-student interactions were found, Kuh et al. (2005), state that “students are more likely to thrive when support comes from multiple sources” (p. 285); and, many of the programs described in this review are administered by a third party. Collaborations between institutions and the community exist at effective universities (Kuh et al., 2005), and the inclusion of faculty in these programs would reflect the outcomes related to positive faculty-student relationships.

In Morales’ (2008) qualitative study, which explored the resilience of fifty low-income minority students, he found that students attributed their identified mentors as “protective factors” (p. 207). For his female participants, “the quality of the mentor superseded the sharing of the same gender” (p. 209); however, males did not describe as successful inter-gender mentoring relationships as females. For his study, Morales loosely defined mentor as “the role of any adult who takes a particular interest in the participants and helps guide them in a way that contributes significantly to their academic achievement” (p. 207).

Jackson, Hill, and Smith (2003) employed a qualitative study in examining the factors that contributed to the success of fifteen Native American students. From their interviews, various social themes emerged such as dealing with racism, loneliness,

<sup>23</sup> The College Board Advocacy & Policy Center (2010) found that “across the board, young women are outperforming young men with respect to high school graduation rates. White women perform 4 percentage points better than white men, while African American, Hispanic, Native American and Asian women outperform the men in their ethnic or racial group by 9 percentage points, 9 percentage points, 7 percentage points and 2 percentage points, respectively” (p. 2).

and balancing pressure from their families and culture with academic culture. One of the recommendations that Jackson et al. made is the use of a structured peer-mentoring program. They recommend this to resolve two issues that emerged from the interviews and state that “the potentially negative influences of friends would be mitigated by having a mentor who was clearly supportive of academic success” (p. 562). Furthermore, they believe a peer mentor at an advanced level would “serve as a role model for reconciling the conflicting pressures inherent in developing a bicultural identity” (p. 562).

Another study of Native American students by Shotton, Oosahwe, and Cintrón (2007), describes the success of peer mentoring in the persistence of the population. Their phenomenological study included interviews and focus groups with seven Native American juniors and seniors. Four essential elements were identified with regard to establishing a successful mentor-mentee relationship: “(a) the peer mentor’s commitment to the program and to the protégé, (b) the peer mentor’s expression of genuine care for the protégé, (c) the protégé’s perception of the peer mentor as admirable, and (d) the peer mentor’s and protégé’s ability to relate to one another” (p. 90). These findings are reflective of previous mentor research (Shotton et al.). Furthermore, the study supported research that demonstrates “positive results from same-ethnicity mentoring” (p. 97). Further benefits of peer mentors for the students in the study were that mentors served as a conduit to connecting social with the college environment and provided the mentees with “support and guidance” (p. 97). Their findings indicate that selection and training of peer mentors should be conducted thoughtfully and thoroughly. While their sample was small, their use of several forms of data collection helped to ensure transferability of the results of this study to students from similar backgrounds.

One element examined by Wilson (2006) was the influence of mentoring on retention rates at New Zealand polytechnic. While he uncovered that students (who were paired with one of the teachers who served as a mentor) often did not utilize their mentors, students with mentors “were more likely to have discussed future goals” and “strongly agreed that their teachers were helpful when they discussed these matters with them” (p. 254). One reason that students, especially those who needed guidance most, did not participate highly in the program may be that the program lacked structure and training for mentors. Wilson writes that “counseling and advising are specialist tasks and not natural skills that all teachers have” (p. 258). Students also tended to approach teachers who they felt most comfortable with, regardless if that instructor was their assigned mentor.

Torres and Hernandez (2009) conducted a multi-institution, longitudinal study in which they compared Latino/a students with an identified mentor to those without a mentor. They conducted a survey every spring for three years and “found that students with an identified advisor/mentor consistently have higher levels of institutional commitment, satisfaction with faculty, academic integration, cultural affinity, and encouragement” (p. 141). They also described two exemplary mentoring programs for Latino/a students: Faculty Mentoring Program (FMP) and The Puente Project. FMP strives to pair student mentees with faculty mentors with a Latino/a background—students who shared the same ethnicity as their mentor demonstrated higher approval of the program as well as self efficacy. Overall, students in the program were more successful than students without mentors. The Puente Project developed through Chabot College involves a mentoring aspect that pairs students with someone from the community (as well as academic advising and specified curriculum). With this approach, The Puente Project saw increases in retention and transfer rates. They began with 541 participants, and in their final survey had 171 respondents. Over 75% of the students surveyed were first generation college

students, and about 65% of the original sample were female. The survey questions were formed from data collected during interviews with participants and were found to be reliable.

### Conclusion

The current theoretical frameworks are moving toward the inclusion of Indigenous perspectives and placing responsibility on institutions to remove their systematic obstacles. There are various barriers to academic retention; for Hawaiian students in particular, these barriers include financial, academic, cultural, and social. While the literature that explores Hawaiian students' persistence is small, hopefully as researchers begin to incorporate emerging frameworks in their studies, more information will emerge. However, current models for addressing issues of student retention seem relevant to the needs of Hawaiian students in that they concentrate on assisting students in financial and academic need with programs that encourage social connectedness and community. In particular, a mentoring program which pairs successful students or graduates with at-risk students could be especially effective for this population, as the literature demonstrates. As institutional resources do exist with regard to tutoring and advising, a well-trained mentor could refer the student to appropriate resources. More importantly, a mentor could serve as a role model and cultural link between the institution and the student.

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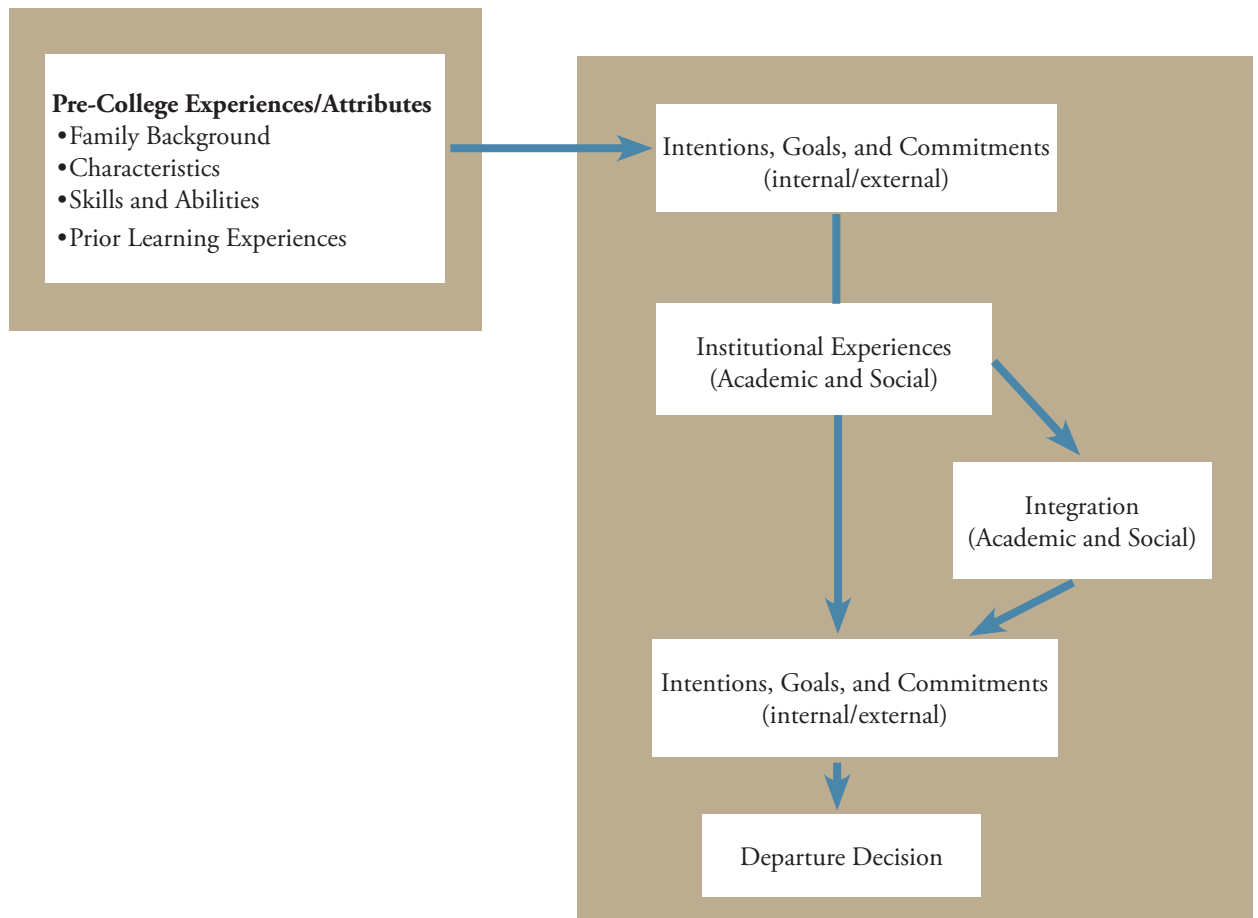
## APPENDIX A: SUMMARY TABLE

<b>Theoretical Frameworks</b>	
<i>Researcher(s)</i>	<i>Summary of Theory</i>
Tinto	Persistence occurs when a student successfully integrates into the institution academically and socially. Integration occurs through interactions with the institution and is also influenced by pre-college background and current goals, intentions, and commitments.
Rendón, Jalamo, & Nora	Critique the assimilation viewpoint of Tinto's theory. Suggest the concept of "dual socialization" as an alternative.
Kuh & Love	Eight propositions that help explain persistence through a student's culture. Like Tinto, Kuh & Love's propositions rely on a student's ability to integrate, or identify with a social group that reflects their culture of origin, in order to persist (putting most of the responsibility on the student).
Tierney	Uses concepts of power to explain persistence; relies on the building of cultural capital, and does not require students to assimilate to dominant culture.
Wells	Extends Berger (2000) by including social capital into model of persistence based on cultural capital.
Purswell et al.	Combines social capital with Theory of Planned Behavior. This model states that peer support and intention are important predictors of success for students whose parents have some or no college experience.



<b>Factors Influencing Persistence</b>
<p><i>Academic Factors</i></p> <ul style="list-style-type: none"> <li>• Courseload/Credits earned</li> <li>• Pre-college high school experience/Academic performance</li> <li>• College GPA/Academic performance</li> <li>• Academic self-discipline</li> <li>• SAT scores</li> <li>• Academic engagement, including undergraduate research</li> </ul> <p><i>Attitudes and Characteristics</i></p> <ul style="list-style-type: none"> <li>• Race/ethnicity has indirect effects</li> <li>• Parental education attainment</li> <li>• Socioeconomic status/Availability of aid</li> <li>• Optimistic disposition</li> <li>• Institutional commitment and Intentions</li> <li>• Living on campus</li> <li>• Self-confidence/Self-efficacy</li> </ul> <p><i>Social Support/Family</i></p> <ul style="list-style-type: none"> <li>• Sense of belonging</li> <li>• Institutional opportunity structures</li> <li>• Mattering</li> <li>• Holistic support services</li> <li>• Supportive family</li> <li>• Supportive faculty/staff</li> <li>• Connections to home and culture</li> </ul>
<b>Implications for Future Research/Practice</b>
<ul style="list-style-type: none"> <li>• How can Hawai'i's institutions collaborate with the Native Hawaiian community to provide the supportive environments found at tribal colleges (which have successful retention rates for Native Americans)?             <ul style="list-style-type: none"> <li>○ Structured mentoring programs, holistic services, financial aid, inclusion of family in college experience, learning communities, educate college faculty</li> </ul> </li> <li>• In what ways can/do Hawai'i's college preparatory programs build cultural/social capital, combat racist attitudes, and promote Hawaiian students as scholars (such as the NAI cited in Tierney)?</li> <li>• What are the areas of Hawaiian culture that overlap with the college environment, which could promote dual socialization?</li> </ul>

## APPENDIX B: A SIMPLIFIED VERSION OF TINTO'S MODEL OF PERSISTENCE



APPENDIX C<sup>24</sup>**Year One questionnaire on what you expect at university.**

Please circle ONE response for EACH of these seven questions as follows:

4 = very often 3 = fairly often 2 = occasionally 1 = rarely/never

I will have contact with my tutors	1 2 3 4
I will work in collaboration with other students, and share experiences with them	1 2 3 4
I will become involved in a variety of learning activities, and have not just sat listening to lectures	1 2 3 4
I will receive prompt and helpful feedback from tutors on my progress	1 2 3 4
I will devoted approximately 30 hours per week to my studies, <i>in addition</i> to the time spent in class	1 2 3 4
Tutors will emphasized the high expectations they have for my academic progress and achievement	1 2 3 4
I will have the opportunity to study in ways that personally work for me	1 2 3 4

**Year One questionnaire on what you have experienced at university.**

Please circle ONE response for EACH of these seven questions as follows:

4 = very often 3 = fairly often 2 = occasionally 1 = rarely/never

I have had contact with my tutors	1 2 3 4
I have worked in collaboration with other students, and have shared experiences with them	1 2 3 4
I have become involved in a variety of learning activities, and have not just sat listening to lectures	1 2 3 4
I have received prompt and helpful feedback from tutors on my progress	1 2 3 4
I have devoted approximately 30 hours per week to my studies, <i>in addition</i> to the time I have spent in class	1 2 3 4
Tutors have emphasized the high expectations they have for my academic progress and achievement	1 2 3 4
I have had the opportunity to study in ways that personally work for me	1 2 3 4

<sup>24</sup> This questionnaire is adapted from Lewis, M., & Castley, A. (2008). Factors affecting student progression and achievement: Prediction and intervention. A two-year study. *Innovations in Education and Teaching International*, 45(4), 333-343.