Faculty Validation and Persistence Among Nontraditional Community College Students

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Abstract

Community colleges enroll large numbers of nontraditional students who are at greater risk for non-persistence in college. This research examines the influence of validation by faculty on students' sense of integration in college and intent to persist. Three student characteristics were taken into account: gender, race/ethnicity, and age. For each sub-group, an assessment was made of the extent to which higher rates of faculty validation predicted a greater sense of integration or intent to persist. Higher rates of faculty validation moderately to strongly predicted students' sense of integration. With regard to the extent to which faculty validation predicts students' intent to persist at the college, significant, positive results were found for females, Hispanic students, and both younger and older students.

Problem Statement

Factors influencing student persistence in college have been widely studied in response to increasing concern about high attrition rates among students who enter higher education (Braxton, 2002; Pascarella & Terenzini, 2005). While more students are entering college than ever before, large numbers leave during the first year, and a substantial proportion depart before attaining a degree or other credential (Horn, Berger, & Carroll, 2005).

Some types of institutions are considerably more likely than others to have high rates of student attrition. Two-year colleges comprise 44% of all postsecondary institutions in the U. S., and enroll 46% of American undergraduates including over half of all postsecondary freshmen and sophomores (National Center for Education Statistics, 2002). Less than one-third of those who enroll in 2-year colleges receive any kind of certificate or degree within three years of entering (Berkner, He, Cataldi, & Knepper, 2002; Carnevale & Desrochers, 2001). When considering bachelor's degree attainment, students who start out at a 2-year institution with plans to complete a bachelor's degree are 15-20% less likely to do so than students starting their postsecondary education at a 4-year institution (Fiske, 2004).

Low persistence rates are of concern to students who are not able to meet their educational or career goals and to institutions monitoring their students' and their own performance. Persistence is also of concern to society at large because college-educated citizens contribute in many ways to the social good and are less likely to engage in harmful behaviors (Barton, 2002; Carey, 2004; Fiske, 2004). Other advantages accrue to those who attend college. In their comprehensive summaries of the extant literature, Pascarella and Terenzini (2005) observe that the personal advantages consistently associated with college attendance include: significant cognitive gains, especially in verbal ability; gains in knowledge and critical thinking;

greater ability to deal with complexity; increases in tolerance, aesthetic sensibility, and moral development; increases in the amount of time devoted to children and greater encouragement of their college attendance; better health; and an improved sense of psychological well-being.

While persistence rates are low among U.S. college students in general, early departure is much more common among some groups than others. Community college students are three to four times more likely to "reflect the factors that put students most at risk of not attaining a degree. Those factors include delayed entry, part-time enrollment, full-time employment, financial independence, single parenthood, family dependents, and under-preparation for college" (Community College Survey of Student Engagement, 2002, p. 1). Community and technical college students tend to be older, with 46% over the age of 24. In addition, 63% of these students attend part time, compared with 22% at 4-year colleges (Cohen, & Brawer, 2003). Likewise, community college students are disproportionately members of racial and ethnic minorities and have lower family incomes than those attending 4-year institutions, both categories associated with a decreased likelihood of completing college degrees and certificates (Cohen, & Brawer).

There is extensive research that identifies the specific groups of students who are less likely to persist in college (e.g., Berkner, He, Cataldi, & Knepper, 2002; Horn, Berger, & Carroll, 2004: Rendon, 1994; Strauss & Volkwein, 2004; Terenzini et al., 1996; Tinto, 1997, 2004; Woodard, Mallory, & De Luca, 2001). The Beginning Postsecondary Longitudinal Study (NCES, 2002) found that about half of African-Americans, Latino/as, and Native Americans who entered a 4-year college in 1996 were still at the same institution three years later, as opposed to 64% of whites and 71% of Asian Americans. Women constitute increasingly larger percentages of those finishing college (Cohen & Brawer, 2003; NCES, 2002). Sixty-six percent

of women who entered college in 1995 graduated with a bachelor's degree within six years as opposed to 59% of men (Carey, 2004). In addition, students whose parents attended college are more likely to attain a college degree (Bean & Metzner, 1996; Pascarella & Terenzini, 2005). Delayed enrollment in college puts a student at risk for not completing a degree (Feldman, 1993; Price, 2004; Summers, 2003), meaning that students who are older upon entry are at greater risk. Finally, students who have done less well in high school are at higher risk for not persisting in college (Pascarella & Terenzini, 2005).

In order to improve student persistence in community colleges, there is a need for a better understanding of the factors that influence it. The purpose of this study is to illuminate one possible influence on student persistence, as well as on students' sense of integration in college, often posited to be a necessary precondition for persistence (e.g., Tinto, 1993)—that of faculty validation (per Rendon, 1994).

Reasons Why Students Leave

While some students leave college because they are not keeping pace academically, Fiske (2004) quotes Gardiner who states that, "only a quarter of [students] who do not return for the sophomore year will have left in poor academic standing" (p. 11). Significant numbers depart prematurely because of college costs, competing priorities, and lack of appropriate avenues for involvement in the college community (Kuh, 1991; Matti, 2000; Tinto, 2004). Scholars draw on the fields of sociology, psychology, economics, and organizational management in postulating explanations for student departure (Braxton, 2002). While these studies vary greatly in approach and philosophy, many emphasize the importance of student characteristics, behaviors, and decisions in the departure from higher education.

However, other researchers emphasize the role that institutions themselves play in influencing student graduation rates. Carey (2004) notes that, "institutional-level data show that some institutional graduation rates are much, much different from others, *even when compared to institutions with very similar students.* In fact, even after controlling for a host of possible factors that might influence graduation rates—including students' SAT and ACT scores, institutional mission, financial resources, degree programs, size, location and others—we still find that some colleges and universities far outperform their peers" (p. 7, italics in the original). This study assumes that institutions are in a position to affect student integration and student persistence in college via the validation of students by faculty members.

Theoretical Framework

When attempting to explain student departure from college, many scholars emphasize the importance of student integration or involvement in college in influencing student persistence and success (Astin, 1993; Pascarella & Terenzini, 2005; Terenzini et al, 1994; Tinto, 1993, 1998, 2004). Among them, the work of Tinto has attained greatest prominence with numerous studies conducted to assess the accuracy of the 13 propositions that comprise his Longitudinal Model of Student Departure (Braxton, Sullivan, & Johnson,1997). The central thesis of Tinto's model may be summarized as follows, "The process of persistence in college is… viewed as a process of social and intellectual integration leading to the establishment of competent membership in [the college] communities." (1993, p. 121).

In Braxton's (2002) edited volume, *Reworking the Student Departure Puzzle*, a number of researchers discuss the strengths and weaknesses of Tinto's model and consider directions for future research on the topic of student persistence. Braxton refers to review of literature conducted by Braxton, Sullivan, and Johnson (1997) that summarized the empirical support for

each of thirteen propositions implicit in Tinto's model. They concluded that four of these propositions received strong empirical backing in multi-institutional tests, while five were strongly supported in single institutional tests. In some cases, the lack of support for specific propositions may have been attributable to the original construct under consideration, while in others, problems with measurement of the constructs may have played a role.

Rendon (1994) and others (e.g., Rendon, Jalomo, & Nora, 2002; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1996) argued against an over-emphasis on integration. Their research indicated that, for nontraditional students, validation may be a more important influence on student success than integration or involvement. They pointed out that integration is typically viewed as occurring naturally as students become involved in campus life through participation in college activities, living in residence halls, and taking classes. In Rendon's view, students who had not grown up assuming they would go to college were unlikely to become readily integrated into college environments without additional assistance. Validation, defined as "an enabling, confirming and supportive process initiated by in- and out-of-class agents" (Rendon, 1994, p. 44), could provide this extra boost.

Rendon (1994) first began exploring the idea of validation when participating as a researcher in a large qualitative study of ways that student learning was affected by student involvement under the auspices of the Transition to College Project (also described in Rendon & Jalomo, 1995 and Terenzini et al., 1996). A total of 132 first-year students in four diverse college settings participated in focus groups to discuss their decisions to attend college, their expectations for it, and their perceptions of the effect college was having on them. Students were selected as representative of diverse genders, racial/ethnic backgrounds, and residences (on campus or commuting).

The study found important differences between traditional and nontraditional students (Rendon & Jalomo, 1995). While traditional students generally felt confident about being able to succeed in college, many of the nontraditional students did not. Involvement in college did not come easily to them, and depended on "active intervention from significant others to help them negotiate institutional life" (p. 37). Students identified as likely to need extra validation included: racial and ethnic minorities, students who had been out of school for some time, those who had been "off the track of life" (p. 10), full-time mothers or single parents, immature students, those who did poorly in high school, those scared of a new culture, and those who felt incapable of learning.

Rendon (1994) was convinced that, under the right conditions, "even the most vulnerable nontraditional students [could] be transformed into powerful learners through in- and out-of-class academic and/or interpersonal validation" (p. 37). The role of faculty was highlighted as particularly important, while peers and family members were also central. The key was: 1) having someone take an active interest in the student as an individual and 2) structuring activities that would elicit (or require) their full participation in learning. Further, validating experiences were most likely to have an impact when provided by people with a deep understanding of the students' cultural and social background. Simply providing opportunities for student learning and integration and expecting students to take advantage of them was not enough. Her research indicated that students were much more like to become integrated and to persist when they experienced active efforts to validate them on the part of representatives of the educational institution. She described ways that nontraditional students could be transformed into "powerful learners" (p. 39) when faculty and other members of the campus community reached out to them with genuine concern and reinforced the idea that they could be successful as students.

Although Rendon (1994) considered validation to be an alternative to integration or involvement, validation can also be viewed as a precondition for integration. Tinto's (1993) definition of integration as a sense of "competent membership" (p. 208) as a result of, among other things, student interaction with faculty and staff is highly compatible with Rendon's description of the benefits derived from validation. Thus, the current research hypothesizes that validation may lead to greater integration and/or to increased student persistence.

In 2006, this researcher conducted a study to test five hypotheses and three sub-hypotheses related to the influence of faculty validation on integration and persistence. These were formulated as assessments of, and an elaboration of, two propositions in Tinto's (1993) model, i.e., that higher rates of faculty/student interaction in the form of faculty validation predicted greater student integration, and that greater student integration predicted students' intent to persist. Evidence was found to support both of these propositions.

The current research was designed to investigate the extent to which faculty validation predicts: 1) student integration and 2) intent to persist, for sub-groups of students. Rendon (1994) hypothesized that nontraditional students would be especially likely to benefit from validation. In this study, three student characteristics sometimes associated with nontraditional status (see Kim, 2002) are taken into account: gender (male, female), race/ethnicity (Black, White, Hispanic, Asian[1]) and age (under 25, 25+). For each sub-group, an assessment was made of the extent to which higher rates of faculty validation predicted a greater sense of integration (defined as a sense of competent membership) or intent to persist (defined as the intent to return to study at the same institution during the following semester).

[1] Short versions are used in this document. In the research, the following racial/ethnic categories were used: Black/African American, White/Caucasian, Hispanic/Latino, Asian/Pacific Islander, Other (specific identification was requested).

Hypotheses

The work of previous authors on the topic of student validation in the community college has been largely exploratory and qualitative (e.g., Rendon, 1994; Rendon & Jalomo, 1995; Terenzini et al., 1996). This study was designed to use quantitative methods to further investigate the meaning of validation and the relationship between validating experiences, a sense of integration, and persistence in college. The study was designed to test six hypotheses:

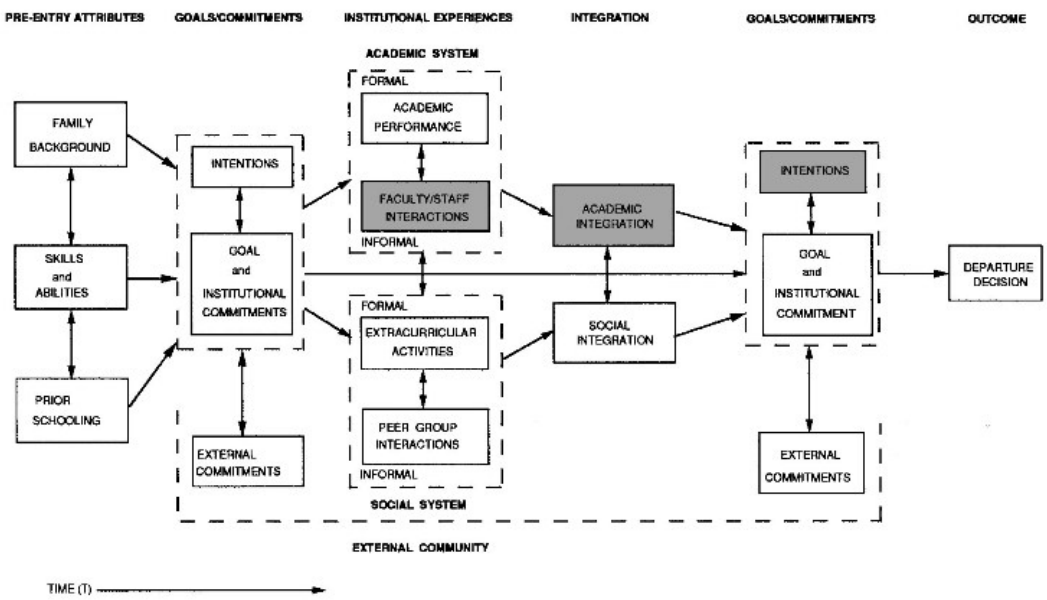
1. For both men and women, higher rates of validation by faculty predict a greater sense of integration in college.
2. For both men and women, higher rates of validation by faculty predict a greater intent to persist in college.
3. For Black, White, Hispanic, and Asian students, higher rates of validation by faculty predict a greater sense of integration in college.
4. For Black, White, Hispanic, and Asian students, higher rates of validation by faculty predict a greater intent to persist in college.
5. For both younger and older students, higher rates of validation by faculty predict a greater sense of integration in college.
6. For both younger and older students, higher rates of validation by faculty predict a greater intent to persist in college.

Conceptual framework

The current study was designed to examine and elaborate upon a specific aspect of Tinto's model as shown in Figure 1. The shaded areas on the figure show the portion of the model explored in this research-- that positing that the interactions students have with faculty/staff influence their sense of integration, and that integration, in turn, influences student

intentions to persist. Specifically, the research is intended to serve as an elaboration of Tinto's (1993) interactionalist theory of college student departure, using Rendon's (1994) work on validation as the basis for understanding the *ways* that faculty and staff in classrooms and college environments influence students' sense of integration and their intent to persist.

Figure 1: Tinto's model with relationships of interest in the current research indicated [2]

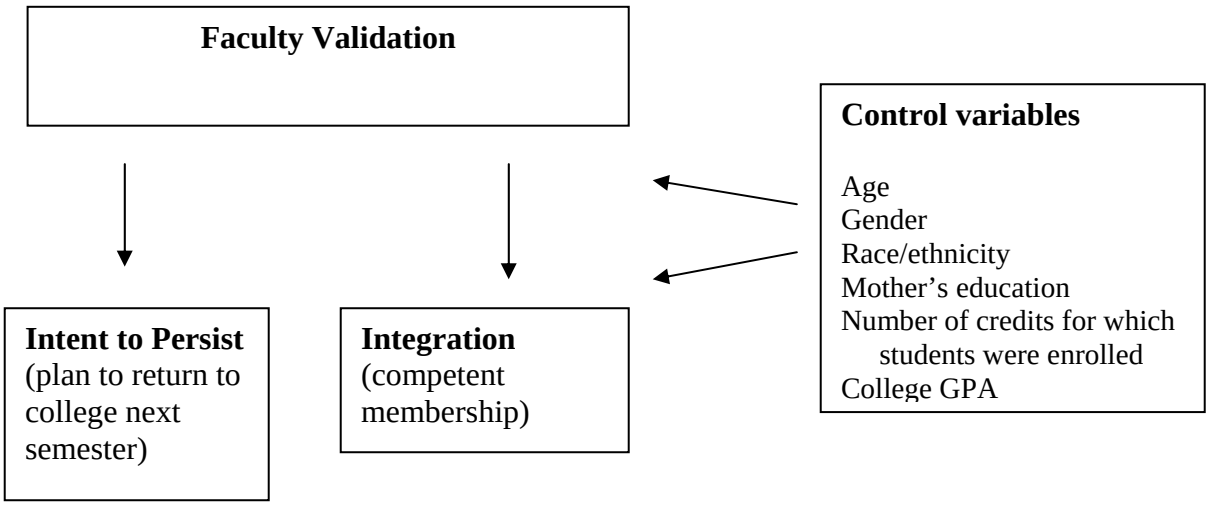


[2] From: "Leaving College: Rethinking the Causes and Cures of Student Attrition," by V. Tinto, 1993, p.114.

Rendon (1994) proposes that validating experiences are of particular importance to nontraditional students. This research explores whether this is indeed the case. While it is certainly of interest to learn whether the model works for community college students in general, it is also important to learn whether there are groups of students for whom validation is an especially important influence on sense of integration and their intent to persist. Thus, this study will look at how well the model works for specific subgroups distinguished by age (25 and older, less than 25), gender (male, female) and race/ethnicity (African American, Latino/a,

Asian/Pacific Islander, White, Other). Figure 2 shows the model that underlies the current research based on the segment of interest in Tinto's (1993) interactionalist model.

Figure 2: A model of the relationships of interest in the current research



Methodology and data sources

A demographically diverse, urban community college was selected for participation in this study. A decision was made to focus on an urban community college for three reasons. First, very little previous research has been conducted in them and they are not well understood as institutions (Bailey & Alfonso, 2005). Second, they generally have more diverse populations than their suburban or rural counterparts (Smith & Velani, 1999), an important consideration for a study on the validation considered to be of particular importance to nontraditional students. Finally, student graduation rates tend to be lower than those of colleges in suburban and rural areas (Cullen, 2005), making the study of persistence in these settings even more critical.

The students at Midwest College are diverse, coming from 144 countries and speaking more than 56 languages. The college's data indicate that, in the 2004-05 year, 7,355 students were enrolled in credit courses, 17,817 in Adult Basic Education, and 2,833 in other programs for a total of 26,652 headcount enrollments. The average age of students in credit programs was

29 and, in all programs combined, it was 32. Of students in credit programs, 53% indicated that their goal was to transfer to a four-year college after graduation (Midwest College Statistical Digest, 2005).

The population of interest consisted of all students attending credit-bearing classes at this purposively selected urban community college. All introductory college-level English (English 101, English 102) classes offered during the Spring of 2006 were selected as those in which all students entering college with intent to complete a degree would participate. They would also be introductory courses for most degree programs, whether career- or transfer-oriented. Students in these classes would therefore be likely to be representative of degree-seeking students at the college in general. In addition, students in these classes would have already demonstrated their readiness to undertake college level work, by passing placement tests or completing remedial coursework. Thus, they would be somewhat less likely to consider dropping out due to inadequate academic skill levels of the type associated with lack of persistence in college (Adelman, 1999; Cohen & Brawer, 2003).

A cross-sectional survey design was selected for this research. To accomplish this, the following variables were operationalized and measured: validation by faculty, persistence in college, and integration, defined here as *competent membership*. Previously validated scales were found to measure students' sense of competence and membership (Hurtado, & Carter, 1997; Roeser, Midgley, & Urdan,1996). Intent to persist was defined as students' expressions of their intent to continue their studies at the same institution during the semester following their participation in this research, assuming that they would not yet have attained the degree or certification toward which they were working (Tinto, 1993). To operationalize this variable, students were asked to respond to one item, "I am planning on returning to this college for the

Fall 2006 semester." However, no previous survey research had been conducted on faculty validation. Therefore it was necessary to undertake a process to develop a faculty validation scale in order to conduct this research. This was done following the recommendations of numerous scholars (e.g., Ebel, & Frisbie, 1991; Dawis, 1987; Devellis, 2003; Framboise, Coleman, 1991; Kuh, 2001) and involved the use of multiple measures to validate the scale, specifically: (a) the creation of items based on the literature, (b) a review of the items by ten national experts on student development and student persistence in postsecondary education (including Andrea Bueschel of the Carnegie Foundation for the Advancement of Teaching, George Kuh of Indiana University, Amaury Nora of the University of Houston, Laura Rendon of Iowa State University, Barbara Townsend of the University of Missouri and others), (c) the selection of items, and (d) the use of a number of statistical and procedural measures to assess their performance. The full instrument was pilot tested and the results analyzed to assess content and construct validity and reliability.

Surveys were administered to a total of 333 students, from 22 English classes at the selected college, during the spring of 2006. Scores for each student were developed indicating the extent to which each: 1) felt validated by faculty at the college, 2) felt a sense of integration or competent membership at the college, and 3) intended to return to the college in the subsequent semester.

Compilation of the student demographic information revealed that students who participated in the study ranged in age from 17 to 71, with a mean age of 25. Sixty one percent were female. Non-white students comprised 76% of the total. A large proportion, 38%, had attended high school in other countries. Clearly, a diverse sample was obtained as displayed in Table 1.

Table 1: Characteristics of Sampled Students

Characteristic	Number of Respondents	Response Categories	*P*
Age	317	Under 18 years	2%
		18-22 years	46%
		23-25 years	19%
		26-30 years	18%
		Over 30 years	18%
Gender	327	Male	39%
		Female	61%
Race/ethnicity	320	Black/African American	30%
		White/Caucasian	24%
		Hispanic/Latino	20%
		Asian/PI	20%
		Other	6%
Location of high school attended	285	Chicago	45%
		Other US	18%
		Other countries	38%
Mother's education	309	No high school	13%
		Attended high school	10%
		Completed high school	18%
		Some college	13%
		Earned associates degree	9%
		Earned bachelors degree	18%
		Earned graduate degree	13%
		Don't know	6%
Father's education	303	No high school	12%
		Attended high school	9%
		Completed high school	13%
		Some college	15%
		Earned associates degree	8%
		Earned bachelors degree	16%
		Earned graduate degree	17%
		Don't know	12%

Multiple linear regression was used to test the six hypotheses. The procedures included the use of control variables for gender, race/ethnicity, mothers' education, age, number of credits for which students were enrolled, and college grade point average. These were entered into the equation as Block 1. The dependent variables, students' sense of integration or intent to persist, entered the equation as Block 2. The pertinent items were removed as control variables from the equations when results for specific sub-groups were sought. Missing values were removed in a listwise fashion. Collinearity statistics were obtained for all of the analyses, and data was reviewed to determine whether an excess of outliers posed a problem (over 10%, according to Muijs, 2004). They did not.

Findings

In order to put the findings of this research in perspective, analysis was first performed, using multiple linear regression, of the extent to which higher rates of faculty validation predicted a greater sense of integration or competent membership among all students surveyed. The same control variables were used. Muijs (2004) considers an R square of greater than .500 to indicate that a model is a strong fit to the data. An overall R square for this model of .559, significant at the $p < .01$ level, indicates that a strong fit was obtained. In other words, the independent variables included in the model were found to strongly predict higher levels of integration or students' sense of competent membership within the context of the overall model.

It was further helpful to ascertain whether students who had validating experiences were more likely to express the intent to remain in college. Muijs (2004) considers an R square between .11 and .30 to indicate a model with a modest fit to the data. Using this guideline, an overall R square for the model of .246, significant at the $p < .01$, level indicates that a modest fit was obtained. In other words, the independent variables included in the model were found to

modestly predict a greater likelihood that students would express their intent to return to college for the subsequent semester within the context of the overall model.

Subsequently the same models were run for each of the sub-groups of interest in order to test the six hypotheses of interest in this research. It should be noted that the small size of the sub-groups in many cases may have limited the extent to which significant effects could be detected and/or complicate interpretation of results. The results are shown in Table 2.

Table 2: Results of multiple linear regression equations

Student Characteristic	Sub-group	n	Faculty validation (FV) predicts integration		Faculty validation (FV) predicts intent to persist	
			(R square)*	Beta of FV	(R square)*	Beta of FV
Gender	Male	57	.537	.696		
	Female	77	.641	.753	.370	
Race/ethnicity	White	41	.721	.858		
	Black	41	.438	.486		
	Hispanic	24	.636	.788	.490	.514
	Asian	25	.497	.619		
Age	Under 25	83	.520	.673	.325	.278
	25+	51	.641	.740	.195	.387

*Only statistically significant ($p < .05$) R square values are shown.

These findings supported hypothesis one which states that, for both men and women, higher rates of validation by faculty predict a greater sense of integration in college. The model for men, yielded an R square of .537, indicating that a strong fit had been obtained (per Muijs, 2004; his criteria are used throughout). The model for women, yielded an R square of .641, indicating that a strong fit had been obtained. In other words, for both men and women, faculty validation was found to strongly predict higher levels of integration or their sense of competent membership in the college, within the context of the overall model.

With regard to hypothesis two which states that, for both men and women, higher rates of validation by faculty predict a greater intent to persist in college, the model yielded significant results for women, but not for men. The model for women yielded an R square of .370, indicating that a moderate fit had been obtained. In other words, for women, but not for men, faculty validation was found to moderately predict a stronger intent to persist in college, within the context of the overall model.

These findings supported hypothesis three which states that, for Black, White, Hispanic, and Asian students, higher rates of validation by faculty predict a greater sense of integration in college, with especially strong models emerging for White and Hispanic students. Specifically, the models for White and Hispanic students yielded R square of .721 and .636 respectively, indicating that strong fits had been obtained. For Black and Asian students, the models yielded R squares of .438 and .497 respectively, indicating that a moderate fit had been obtained. In other words, for all of the racial/ethnic groups considered in this research, faculty validation predicted higher levels of integration or a sense of competent membership in the college, within the context of the overall model.

With regard to hypothesis four which states that, for Black, White, Hispanic, and Asian students, higher rates of validation by faculty predict a greater intent to persist in college, the model yielded significant results for Hispanic students, but not for the other groups. The model for Hispanics yielded an R square of .491, indicating that a moderate fit had been obtained. In other words, for Hispanic students, but not for any of the other racial/ethnic groups, faculty validation was found to moderately predict a stronger intent to persist in college, within the context of the overall model.

These findings also supported hypothesis five which stated that, for both younger and older students, higher rates of validation by faculty predict a greater sense of integration in college. The model for students younger than 25 yielded an R square of .641, indicating that a strong fit had been obtained. The model for students 25 and older yielded an R square of .641, indicating that a strong fit had been obtained. In other words, for both younger and older students, faculty validation was found to strongly predict higher levels of integration or their sense of competent membership in the college, within the context of the overall model.

Finally, with regard to hypothesis six which stated that, for both younger and older students, higher rates of validation by faculty predict a greater intent to persist in college, the model yielded significant results for both younger and older students. The model for students under 25 yielded an R square of .325, indicating that a moderate fit had been obtained. The model for students 25 and older yielded an R square of .195, indicating that a modest fit had been obtained. In other words, for both younger and older students, faculty validation was found to moderately or modestly predict a stronger intent to persist in college, within the context of the overall model.

These findings provide empirical support for Rendon and Jalomo's (1995) proposition that validation can contribute to students' sense of integration and intent to persist in college, among other positive outcomes. In their research, validation by college faculty and staff was found to help nontraditional students to become integrated, leading to the positive outcomes associated with it. Similarly, in this research, students who had experienced greater faculty validation, as indicated by their responses to relevant survey items, were more likely to feel integrated and also to express the intent to persist.

Implications

Institutions are experiencing increasing pressures to improve rates of graduation from federal, state, and local governments and from the public. Over 39 states employ accountability measures calling for performance reporting in higher education while 37 have instituted either performance funding or performance budgeting (Burke & Minassians, 2001). In addition, many community colleges are deeply committed to helping students achieve their educational goals. For example, Ayers (2002) found that 82% of southern U.S. community colleges included access as part of their formal mission statement. To fulfill this mission, many community colleges invest considerable energy into understanding and addressing those factors that have been shown to influence student persistence decisions.

The current research findings suggest that institutions should consider taking measures to increase faculty validation of students. This research further suggests that Hispanic students and women may be most likely to respond to faculty validation by continuing their studies at the institution; perhaps they could be targeted for extra attention by faculty. Three strategies that could be used to increase the likelihood that faculty will engage in validating practices include: (a) college-provided incentives to faculty to invest time in assisting nontraditional and underserved students, (b) helping faculty learn about the importance of meaningful validation of students, (c) redefining faculty roles and responsibilities to explicitly include validation of students in ways that research suggests may be especially powerful (see Barnett, 2006). While not every faculty member can or will actively validate students, it would appear that most would be willing. In the survey cited previously (Higher Education Research Institute, 2005), 83% of respondents said that faculty members at their institution were interested in students' academic problems, and 85% were interested in their personal problems. In addition, 72%

experience joy in their work “to a great extent” (p. 4) which could translate into a willingness to devote time and energy. It would appear that greater investments in improving faculty validation of students within the classroom may yield greater benefits than increasing the number of stand-alone programs.

In addition, further study is needed to address an important limitation of this study. Research is needed to learn whether faculty validation and/or competent membership predict actual retention in college during subsequent years and through the completion of a degree or certificate. Likewise, further study would reveal important detail regarding the types of faculty validation that are most predictive of increased student retention, and which students are most likely to respond to these practices.

References

Adelman, C. (1999). *Answers in the tool box: Academic intensity, attendance patterns and bachelor's degree attainment.* Short Web-based version. Washington, DC: U.S. Department of Education. Retrieved October 26, 2002 from http://www.ed.gov/pubs/Toolbox/toolbox.html

Astin, A. (1993). *What matters in college: Four critical years revisited*. San Francisco: Jossey-Bass Publishers.

Ayers, D. F. (2002). Mission priorities of community colleges in the southern United States. *Community College Review, 30,* 11-31.

Bailey, T. R. & Alfonso, M. (2005). *Paths to persistence: An analysis of research on program effectiveness at community colleges.* New York: Community College Research Center, Teachers College.

Barnett, E. A. (2006). *Validation experiences and persistence among urban community college students.* Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.

Barton, P. E. (2000). *The closing of the education frontier?* Policy Information Report. Princeton, NJ: Educational Testing Service.

Bean, J. P., & Metzner, B. S. (1996). A conceptual model of nontraditional undergraduate student attrition. In F. Stage, G. Anaya, J. Bean, D. Hossler, & G. Kuh, (Vol. Eds.) *ASHE reader series: College students: The evolving nature of research* (pp. 54-65). Needham Heights, MA: Simon & Schuster Custom Publishing.

Berkner, L., He, S., Cataldi, E. F., & Knepper, P. (2002). *Descriptive summary of 1995-96 beginning postsecondary students: Six years later* (Statistical Analysis Report). Washington, DC: National Center for Education Statistics, USDOE.

Braxton, J. P. (2002), Introduction. *Reworking the student departure puzzle.* Nashville, TN: Vanderbilt University Press.

Braxton, J. M., Sullivan, A. S., & Johnson, R. M. (1997). Appraising Tinto's theory of college student departure. In J. C. Smart (ed.), *Higher Education: A Handbook of Theory and Research: Vol. 12.* (pp. 107-164). New York: Agathon Press.

Burke, J. C., & Minassians, H. (2001). *Linking state resources to campus results: From fad to trend.* Albany, NY: The Rockefeller Institute of Government, Higher Education Program.

Carey, K. (2004). *A matter of degrees: Improving graduation rates in 4-year colleges and universities* (Report). Washington, DC: Education Trust.

Carnevale, A. P., & Desroches, D. M. (2001), *Help wanted… credentials required: Community colleges in the knowledge economy.* Princeton, NJ: Educational Testing Service.

Cohen, A. M., & Brawer, F. B. (2003). *The American community college (4th ed.).* San Francisco: Jossey-Bass Publishers.

Community College Survey of Student Engagement (2002). Focusing on the face of the future. *CCSSE Highlights* (Issue Brief Vol. 1, Issue 2). Austin, TX: Author.

Cullen, D. (2005). *Community college students, particularly those in an urban setting, and transfer; Examined using a social capital framework.* Unpublished class paper. Champaign, IL: University of Illinois at Urbana-Champaign.

Dawis, R. V. (1987). Scale construction. *Journal of Counseling Psychology (34)* 4, 481-489.

Devellis, R. F. (2003). *Scale development: Theory and applications.* Thousand Oaks, CA: Sage Publications.

Ebel, R. L., & Frisbie, D. A. (1991). *Essentials of educational measurement (5th ed.).* Englewood Cliffs, NJ: Prentice Hall.

Feldman, M. J. (1993). Factors associated with one-year retention in a community college. *Research in Higher Education, 34,* 503-512.

Fiske, E. B. (2004). Introduction. *Lumina Foundation Focus.* Retrieved April 28, 2004 from http://www.Luminafoundation.org/cgi-bin/tools/print.pl?1861

Framboise, T. D., & Coleman, H. L. K. (1991) Development and factor structure of the cross-cultural counseling inventory- revised. *Professional Psychology: Research and Practice (22)*5, 380-388.

Higher Education Research Institute, UCLA (2005). Views and Characteristics of Community College Professors. *Chronicle of Higher Education*. Retrieved October 25, 2005 from http://chronicle.com/weekly/v52/i10/10b01001.htm?cch

Horn, L., & Berger, R., & Carroll, C. D. (2004). *College persistence on the rise? Changes in 5-year degree completion and postsecondary persistence rates between 1994 and 2000* (Report). Washington, DC: US Department of Education, Institute of Education Sciences.

Hurtado, S., & Carter, D. F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education, 70,* 324-345.

Kim, K. A. (2002). ERIC review: Exploring the meaning of 'nontraditional' at the community college. *Community College Review, 30,* 74- 90.

Kuh, G. D. (2001) *The national survey of student engagement: Conceptual framework and overview of psychometric properties.* Bloomington, IN: Indiana University Center for Postsecondary Research and Planning.

Matti, F. A. (2000). *Factors affecting minority students' persistence in community colleges.* Unpublished doctoral dissertation, University of Missouri, Kansas City.

Muijs. D. (2004). *Doing quantitative research in education with SPSS.* Thousand Oaks, CA: Sage Publications, Inc.

National Center for Education Statistics (2002). *Digest of Education Statistics 2002* (Statistical Analysis Report). Retrieved September 24, 2004 from http://nces.ed.gov/programs/digest/d02/tables/dt243.asp

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: Volume 2, A third decade of research.* San Francisco: Jossey-Bass Inc., Publishers.

Price, D. V. (2004). Defining the gaps: Access and success at American's community colleges. *Keeping America's promise: A report on the future of the community college.* Denver, CO: Education Commission of the States.

Rendon, L. (1994). Validating culturally diverse students: Toward a new model of learning and student development. *Innovative Higher Education, 19,* 33-51.

Rendon, L., & Jalomo, R.E. (1995). *Validating student experience and promoting progress, performance, and persistence through assessment*. Paper presented to the NCTLA Assessment Institute, Los Angeles, CA.

Rendon, L., Jalomo, R.E., & Nora, A. (2002). Theoretical considerations in the study of minority student retention in higher education. In C. Turner, A.L. Antonio, M. Garcia, B.V. Laden, A. Nora, & C.L. Presley (Eds.), *Racial and ethnic diversity in higher education* (2nd ed., pp. 584-600).Boston, MA: Pearson Custom Publishing.

Roeser, R. W., Midgley, C. & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: the mediating role of goals and belonging. *Journal of Educational Psychology, 88*(3), 408-422.

Smith, J. L., & Vellani, F. A. (1999). Urban America and the community college imperative: The importance of open access and opportunity. *New Directions for Community Colleges, 107*, 5-13.

Strauss, L. C., & Volkwein, J. F. (2004). Predictors of student commitment at two-year and four-year institutions. *The Journal of Higher Education, 75*(2), 203-227.

Summers, M. D. (2003). ERIC review: Attrition research at community colleges. *Community College Review, 30,* 64-85.

Terenzini P., Rendon, L., Upcraft, M., Millar, S., Allison, K., Gregg, P. & Jalomo, R. (1996). The transition to college: Diverse students, diverse stories. In F. Stage, G. Anaya, J. Bean, D. Hossler, & G. Kuh, (Vol. Eds.) *ASHE reader series: College students: The evolving nature of research* (pp.54-65). Needham Heights, MA: Simon & Schuster Custom Publishing.

Tinto, V. (2004). *Student retention and graduation: Facing the truth, living with the consequences* (Occasional Paper 1). Washington, DC: The Pell Institute.

Tinto, V. (1998). Colleges as communities: Taking research on student persistence seriously. *The Review of Higher Education, 21*, 167-177.

Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *The Journal of Higher Education, 68,* 599-623.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition.* Chicago: University of Chicago Press.

Woodard, D. B., Mallory, S. L., & De Luca, A. M. (2001). Retention and institutional effort: A self-study framework. *NASPA Journal, 39,* 53- 83.