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Elisabeth A. Barnett

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INTRODUCTION

Factors influencing student persistence in college have been widely studied in response to increasing national concern about high attrition rates among students enrolled in postsecondary 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). 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' performance and their own. Persistence is also of concern to society at large because college-educated citizens contribute in multiple ways to the social good and are less likely to engage in harmful behaviors (Barton, 2002; Carey, 2004; Fiske, 2004).

Early departure from college is much more common among some institutional types and groups of students than others. While community colleges enroll almost half of the nation's college students (National Center for Educa-

ELISABETH A. BARNETT is Senior Research Associate at both the Community College Research Center and National Center for Restructuring Education, Schools, and Teaching at Teachers College, Columbia University. Address queries to her at 525 W. 125th Street, Box 110; telephone: (212) 678-3719; email: barnett@tc.edu.

tion Statistics, 2002), fewer than one-third of their students receive any kind of certificate or degree within three years of entering (Berkner, He, Cataldi, & Knepper, 2002; Carnevale & Desrochers, 2001). Further, 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” (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 as compared to 22% at four-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 four-year institutions (Cohen & Brawer, 2003). Finally, community college students are less likely to be academically prepared for college as indicated by their rate of participation in developmental education courses upon entry into college. While 20% of students entering public four-year institutions in 2000 required developmental education in reading, writing, or math, 42% of students entering public two-year colleges required developmental education in one or more subject areas (Parsad & Lewis, 2003).

Despite the fact that community college students are at particular risk of non-persistence in college, little research has been conducted in this setting (Bailey & Alfonso, 2005). Further, much of the research on persistence has focused on aspects of the college experience occurring outside the classroom, such as involvement in the campus community, participation in special programs, or out-of-class interactions with faculty.

For community college students, most of their college experience is classroom-based. As students who generally live off campus and have multiple responsibilities (Cohen & Brawer, 2003), they are typically present at the college only when they attend classes; similarly, the only college representatives with whom they regularly interact are faculty members. Thus, I designed this research to look at students' interactions with faculty in the community college setting with a focus on the way that *validating* interactions may influence students' persistence decisions. The study is based on the proposition that when students are validated (recognized, respected, and seen as valued), they are more likely to remain in college. More specifically, the research tests two propositions in Tinto's (1993) Longitudinal Model of Institutional Departure, utilizing Rendón's (1994, 2002) construct of *validation* as a framing mechanism.

THEORETICAL FRAMEWORK

When attempting to explain student departure from college, many scholars emphasize the importance of student integration or involvement in college,

meaning engagement in academic and extracurricular activities associated with college (Astin, 1993; Bean & Metzner, 1996; Pascarella & Terenzini, 2005; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1996; Tinto, 1993, 1998, 2004). They posit that integration or involvement in college predicts higher rates of retention and that it often flows naturally from living in residence halls, participation in college courses, and engagement in campus activities. Bean and Metzner (1996) and others following their lead (e.g., Stahl & Pavel, 1992) focused specifically on nontraditional student persistence. Bean and Metzner proposed that a wide range of factors may influence persistence including social integration (defined as the extent and quality of interactions that students have with the college's social system) although they considered such interactions a less important predictor of persistence than academic experiences and external variables such as family responsibilities. Overall, integration and involvement, framed in different ways by different researchers, are seen as central to student persistence (Braxton, 2002).

Most frequently cited among scholars whose work focuses on student integration, however, is Tinto (1993) whose interactionist model of student departure from college holds, according to John Braxton (2002), nearly paradigmatic status. It is difficult to summarize Tinto's model succinctly (see Figure 1) as it is complex and comprehensive, and has been refined a great deal over time. Tinto (1993) explains it as follows:

Broadly understood, [the model] argues that individual departure from institutions can be viewed as arising out of a longitudinal process of interactions between an individual with given attributes, skills, financial resources, prior educational experiences, and dispositions (intentions and commitments) and other members of the academic and social systems of the institution. The individual's experience in those systems, as indicated by his/her intellectual (academic) and social (personal) integration, continually modifies his or her intentions and commitments. . . . [The] model posits that, other things being equal, the lower the degree of one's social and intellectual integration into the academic and social communities of the college, the greater the likelihood of departure. (pp. 115–116)

Tinto (1993) also considered colleges to be bifurcated, with separate academic and social domains. He noted that students should ideally feel a sense of integration with, or membership in, both arenas in the college environment. His conception of academic integration consists of a sense of membership in the classroom along with an ability to attain academic success. Social integration involves a sense of membership in the larger college community typically experienced through residence hall life, student activities, and socializing with peers. He saw these two aspects of the college environment as having different features in different institutions and as often influencing each other.

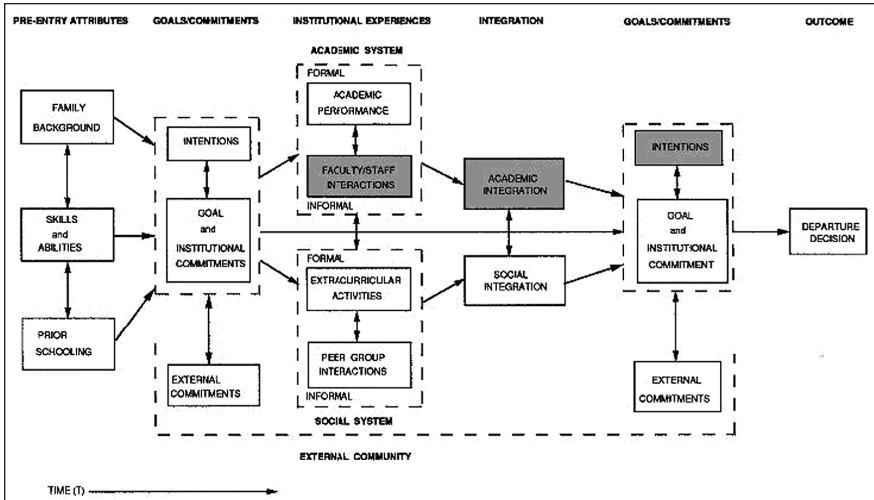


Figure 1. Relationships of interest in Tinto's Longitudinal Model of Institutional Departure. In V. Tinto, *Leaving College: Rethinking the Causes and Cures of Student Attrition* (Chicago: University of Chicago Press, 1993), 114. Reprinted with permission.

Overall, Tinto (1997) hypothesized that academic integration, emphasized in this research, was more important to student persistence.

However, not all scholars endorsed the idea that integration was central to student success. Rendón (1994, 2002) questioned whether integration of the kind emphasized by Tinto (1993) and others was necessarily the most important influence on student retention. She contended that, for nontraditional and underserved students as well as for those in community college settings, validation may be more important for their success and persistence. She defined validation as interactions with students, initiated by faculty and others in the campus community, that engender feelings of self-worth and a belief in the students' ability to succeed in the college environment. She described it as involving demonstrations of recognition, respect, and appreciation for students and their families and communities. Rendón and other scholars (Rendón & Garza, 1996; Rendón & Jalomo, 1995; Rendón, Jalomo, & Nora, 2000; Terenzini et al., 1996) argued that students who did not grow up assuming they would go to college could have insufficient ease with, and knowledge about, college environments to become readily integrated without additional assistance.

Although Rendón (1994, 2002) offered validation as an *alternative* to integration, it may also be viewed as a *precondition* for integration. In other words, faculty and others may reach out to students in validating ways that

lead them to feel more integrated. Examples of validation of this kind could include talking with students about their personal goals, showing an appreciation of their personal and cultural history, or taking extra time to help students learn class material. Tinto (1997, 1998) does not emphasize the role of validation although he recognizes its potential importance in two-year and nonresidential institutions and among nontraditional students. Further, Tinto (1993) defines integration as a sense of “competent membership” (p. 208) resulting from, among other factors, student interaction with faculty and staff. This definition is highly compatible with Rendón’s description of the benefits derived from validation.

Therefore, I designed this study as an elaboration of aspects of Tinto’s Longitudinal Model of Institutional Departure, specifically as an investigation into the relationships shown in the darkened boxes in Figure 1. My study explores Rendón’s (1994, 2002) validation construct as a type of faculty/staff interaction that predicts students’ academic integration and intent to persist in college. I selected intent to persist as the variable of interest for two reasons. First, it is consistent with Tinto’s model that shows “intentions” as a precondition for actual persistence. Second, it was more feasible to measure intent to persist than actual persistence, given resource constraints. However, since actual persistence was ultimately of interest, I assessed the strength of the relationship between intent to persist and actual persistence in the sample. I contacted 63 students from a group who had granted me permission to contact them and asked about whether they had actually continued in college as intended. There was a positive relationship ($r = .474, p < .05$) between their intent to persist and actual persistence.

An additional purpose of this research is to contribute to an understanding of faculty’s role in student persistence decisions, an area that has been largely unstudied. The focus of research on persistence has tended to be on student characteristics, academic preparedness, financial challenges, or out-of-class experiences (Lundquist, Spalding, & Landrum, 2002). In major works summarizing current research on college student retention, the role of faculty is barely mentioned (e.g., Braxton, 2002; Seidman, 2005). In Pascarella and Terenzini’s (2005) classic *How College Affects Students*, only one and a quarter pages (pp. 417–418) are devoted to discussing how interactions with faculty influence students’ educational attainment and persistence, most of which pertain to out-of-class contact.

In sum, I designed this research to examine the extent to which community college students’ experiences with validation by faculty contributed to their sense of academic integration in college and whether such experiences contributed to their intent to persist in college. My intent was to make a contribution to the theoretical understanding of college student departure decisions as well as to inform decisions about practice in community colleges.

METHOD

The study tested five research hypotheses and two sub-hypotheses:

1. Faculty validation has discernible subconstructs.
2. Among community college students, higher levels of faculty validation predict a stronger sense of academic integration in the college.
 - 2a. Sub-hypothesis: Among community college students, higher levels of faculty validation subconstructs predict a stronger sense of academic integration in the college.
3. Among community college students, higher levels of validation from faculty predict a stronger intent to persist in college.
 - 3a. Sub-hypothesis: Among community college students, higher levels of faculty validation subconstructs predict a stronger intent to persist in college.
4. Among community college students, higher levels of academic integration in the college predict a stronger intent to persist in college.
5. The effect of faculty validation on intent to persist is indirect and mediated by students' sense of academic integration in the college.

Prior research (e.g., Rendón 1994; Rendón & Jalomo, 1995; Terenzini et al., 1996) on validation of students in community colleges has been largely exploratory and qualitative. This study was designed to use quantitative methods to further investigate the meaning of validation and the relationship between validating experiences, a sense of academic integration, and intent to persist in college.

This study was the first to use correlational methods to explore college student experiences with validation as conceptualized by Rendón (1994, 2002). As no previous instrument existed to measure the central construct of interest in this study, the creation and validation of an instrument, and particularly of a scale to measure the construct of faculty validation, were important aspects of this research.

The instrument was developed using methods such as those proposed by Dawis (1987), Devellis (2003), Dillman (2000), Ebel and Frisbie (1991), Kuh (2001), Messick (1995), and Pope and Mueller (2000) to enhance its likelihood of generating valid and reliable data. (See technical notes, Appendix A, and instrument, Appendix B.) To develop a scale to measure faculty validation, several steps were taken: (a) the creation of items based on the literature on validation of students, (b) a review of the items for appropriateness and clarity by 10 national experts on student development and student persistence in postsecondary education, (c) the selection of items, and (d) the use of a number of statistical and procedural measures to assess their performance.

While the scale items were developed based on extensive review of the literature, no clear subconstructs emerged in this process. Devellis (2003)

recommends the use of factor analysis and principal components analysis to detect the presence of subconstructs or components underlying a larger construct. This is typically done in order to reduce large amounts of data into categories that can be more easily comprehended and used in policy and practice. In the context of this study, I believed that this procedure might provide evidence of latent constructs (or components) underlying the overall faculty validation construct. These would be of interest in better understanding both the theoretical and practical meaning of the overall construct. If identifiable components were found, they could be treated as independent variables to see whether, and to what extent, they predicted the two dependent variables of interest in this study: academic integration and intent to persist. The identification and analysis of these components would be of value theoretically, in terms of contributing to the elaboration of Tinto's (1993) model. It would also have practical value in terms of identifying possible predictors of student integration and intent to persist. I therefore made a decision to use exploratory principal components analysis to identify underlying subconstructs, if any.

With regard to the operationalization of the term *academic integration*, after considerable investigation of previous research using this term, it became clear that there has been little consistency in the ways in which it is interpreted or defined. In fact, numerous scholars (e.g., Braxton & Hirschy, 2005; Hurtado & Carter, 1997; Kraemer, 1997; Tinto, 1997) have noted the problems that result from defining and measuring academic integration in very different ways. Many studies have measured integration by looking at academic performance or rates of participation in specific types of activities. For example, Kraemer (1997) points out that Pascarella and Pascarella, Smart, and Ethington operationalized academic integration using two items: student grades and membership in a scholastic honor society, while social integration was operationalized as participation in activities (e.g., sports or committees), being president of a student organization, or knowing a professor or administrator personally. In the context of Tinto's theory, such an approach could mean that institutional experiences (e.g., academic performance, faculty/staff interaction, and extracurricular activities) are expected to influence integration (operationalized by many as academic performance, faculty/staff interaction, and extracurricular activities). Clearly, such approaches lead to circular reasoning and are likely to result in spurious findings. Similarly, Hurtado and Carter (1997) noted that most past studies have neglected to distinguish between "students' sense of integration (or psychological measures) and actual participation in campus life (behavioral measures)" (p. 326). This study is explicitly focused on students' sense of integration. The rationale for making this distinction was to identify *experiences* involving faculty validation and then to examine their contribution to a *sense* of integration and subsequent intent to persist in college.

Because of difficulties with measurement, along with the fact that academic integration has seldom been empirically shown to influence subsequent institutional commitment or student departure decisions, Braxton and Lien (2000) believe that the term should be re-conceptualized. Tinto (2000) also suggests that further work be done to improve the measurement of this construct. After considerable reflection on the best way to measure this term, I decided to draw upon a segment in the conclusion of Tinto's book *Leaving College* (1993). Therein, he refers to integration as a sense of "competent membership" (p. 208). This term is used by Tinto to connote both a sense of possessing the knowledge and skills needed for success in the college environment (competence) as well as sense of belonging or being a part of the college community (membership). Existing scales were identified and adapted for competent membership, drawing on Hurtado and Carter (1997) for the construct of membership and Roeser, Midgley, and Urdan (1996) for the construct of competence in an academic setting. It should be noted that the use of a different definition of academic integration could have influenced the results of this study in unknown ways.

To measure intent to persist, one item was used. Students were asked the extent of their agreement with the statement, "I am planning on returning to this college for the Fall 2006 semester," the semester that followed the administration of the survey. A number of items related to student demographics, college experiences, and educational goals were also included. The full instrument was pilot tested and the results analyzed to assess content and construct validity and reliability.

The research was conducted in the spring of 2006 at Midwest College, a community college that is part of an urban community college system with a diverse student population. Midwest College was also selected because its leadership perceived the college as needing to improve student retention and was concerned with the focus of this research. According to NCES data (2005), 13% of students of the students who entered the college in 2001 had graduated within three years of entering Midwest College, while 31% had transferred to another postsecondary institution. The student population of interest consisted of all students attending credit-bearing classes. Introductory college-level English (101, 102) classes were selected for inclusion in the study because students in these required classes were expected to be representative of degree-seeking students at the college. In addition, these students 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). Almost all students in 22 classes completed the survey, administered during regular class hours, for a total of 333 students in the sample.

TABLE 1
COMPARISON OF SELECTED CHARACTERISTICS OF
SAMPLED STUDENTS WITH THOSE OF THE OVERALL
COLLEGE'S CREDIT ENROLLMENTS

<i>Characteristic</i>	<i>Percent of Students Sampled^a (n = 333)</i>	<i>Percent of Credit Enrollments^b (n = 7,355)</i>
<i>Gender</i>		
Men	39%	38%
Women	61%	62%
<i>Race/ethnicity</i>		
Black/African American	30%	28%
White/Caucasian	24%	33%
Hispanic/Latino	20%	22%
Asian/Pacific Islander	20%	17%
Other	6%	0%
<i>Enrollment status</i>		
Full-time (12+ hours)	64%	37%
Part-time (< 12 hours)	36%	63%

^aPercentage of all students included in the research.

^bPercentage of Midwest College students in credit programs of study. Data are from fiscal year 2005 Midwest College Statistical Digest.

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, this sample was diverse. To assess the extent to which the sample reflected the population of credit students at the college, a comparison of sample and non-sample student characteristics was made. As expected, the sample studied was similar in most ways to the population of credit students at the college. In two cases there were notable differences, as shown in Table 1.

Regarding race/ethnicity, it appears that students identified as "Other" in the sample were probably identified as "White" by the college. There was also a difference in the proportion of students studying full- or part-time, i.e., more students in this sample were studying full-time than in the credit population as a whole. This is probably accounted for by the fact that: (a) only day-time classes were included in this research, and (b) full-time stu-

dents had a greater probability of being enrolled in these (or any) classes than part-time students.

To analyze the data derived from the surveys, all responses were entered into SPSS. To assess hypothesis 1, I used exploratory principal components analysis to identify subconstructs of faculty validation. I decided to use principal components analysis for extraction, primarily because it is recommended by many researchers for exploratory analysis, and because it provided an interpretable solution (Costello & Osborne, 2005; Devellis, 2003; Jaeger, 1993; Preacher & MacCallum, 2003; Rummel, n.d.). The number of factors to be retained was decided using the Kaiser Criterion in which those factors with eigenvalues of over 1 were retained. The solution was orthogonally rotated (varimax) because this procedure provided clear and interpretable factor loadings. Missing values were removed in a listwise fashion. The sample size ($n = 263$) was adequate based on Tinsley and Tinsley's (1987; as cited in Devellis, 2003) recommendation that there be 5 to 10 subjects per item included in the analysis. For use in the later regression analyses, factor scores were also derived for each student.

Hypotheses 2, 3, 4, and 5 and sub-hypotheses 2a and 3a were tested using multiple linear regression. These hypotheses and sub-hypotheses involved the examination of possible relationships among faculty validation or its subconstructs, academic integration, and intent to persist. Students who expected to graduate by the end of the spring 2006 semester were removed from all analyses. The following were used as control variables in these procedures: age, race/ethnicity, gender, mother's education, college GPA, and number of credits in which the student was enrolled. The control variables were entered as Block 1, while the independent variables were entered as Block 2. Collinearity statistics were obtained for all of the analyses, and data were reviewed to determine whether an excess of outliers posed a problem (over 10%, according to Muijs, 2004). Values obtained were in acceptable ranges.

Finally, I was concerned that students not entering the equations because they had not completed one or more items might be different from those who did enter the equations. To evaluate this possibility, independent t-tests were run to examine the differences between the two groups in relation to each equation on the following characteristics: age, high school GPA, college GPA, and the number of credit hours in which they were enrolled in spring 2006. Pearson's chi-square tests were run to seek significant differences in gender, race/ethnicity, mother's educational level, and father's educational level. Very small significant differences ($p < .05$) were found in the number of credits for which students were enrolled and college GPA. Students enrolled for more credit hours were more likely to have their data enter each of these equations (mean of 11.9 vs. 10.5 hours). In all but the regression equation pertaining to Hypothesis 5, there were also small but significant differences in

college GPA. Students whose data entered these equations had a significantly higher GPA than those whose data did not (mean of 3.21 vs. 2.97).

DELIMITATIONS/LIMITATIONS

Clearly, this study has important limitations. In this research, only certain relationships in Tinto's (1993) model were tested, specifically faculty/staff interaction, academic integration, and intentions. On the one hand, this approach had the advantage of permitting the exploration of these variables in greater depth. On the other, it meant that many other important influences on student retention included in Tinto's model were not considered.

Second, Rendón (1994) discussed the possibility of validation coming from faculty, staff, parents, peers, and other significant people. In this research, only validation from faculty was considered. At commuter institutions in general, and community colleges in particular, students are often on campus only to take classes (Braxton & Hirschy, 2005), and the only people with whom they regularly interact are their instructors. Thus, faculty members are most likely to be in a position to influence their persistence decisions and thus are of particular importance. However, this consideration limits the research to the examination of only one potential source of validation.

While single-institution studies have been criticized as reflecting the conditions of a specific college rather than having more general applicability (Bailey & Alfonso, 2005), I decided to conduct this research in only one college. A study implemented in a single college permits validation of an instrument with a relatively large sample from one institution during a restricted time frame, while controlling for extraneous factors associated with context, geography, and student experiences. However this approach clearly limits the generalizability of the findings.

The use of intent to persist as a dependent variable rather than a measure of actual persistence limits the conclusions that can be reached about influences on actual persistence in college. While previous studies have found that intent to persist strongly predicts actual persistence (Braxton, Milem, & Sullivan, 2000), this study was limited to the students' own predictions of their intent to persist.

The use of a survey instrument to explore the topic of validation permitted the inclusion of a relatively large number of respondents; it also allowed for the use of descriptive and inferential statistics in the analysis of findings. However, this method does not permit individual voices to be heard; neither does it provide an understanding of the complexities and nuances that reflect the real-life experiences of students who may be struggling to succeed in college environments.

FINDINGS

Analyses of the data used to assess the hypotheses revealed the following:

Hypothesis 1. This hypothesis stated that faculty validation has discernible subconstructs. I performed exploratory principal components analysis that revealed four subconstructs or components related to faculty validation, which explained a substantial proportion of total variation. (a) The cluster of items pertaining to *students feeling known and valued* explained 23.2% of the variation; (b) items pertaining to *caring instruction* explained 14.8% of the variation; (c) items pertaining to *appreciation for diversity* explained 11.4% of the variation; and (d) items pertaining to *mentoring* explained 10.1% of the variation, or a total of 59.5%.

Table 2 shows the items associated with each of the subconstructs and their factor loadings. Factor loadings over .400 are shown in italics. Costello and Osborne (2005) consider .400 to be the minimum loading that should be considered adequate for interpretation in social science research. Items in the table are arranged according to their factor loadings for easier interpretation.

Hypothesis 2. This hypothesis stated that, among community college students, higher levels of faculty validation predict a stronger sense of academic integration in the college. Table 3 displays the results of a multiple linear regression designed to test this hypothesis.

Muijs (2004) considers an R square of greater than .500 to indicate a model that is a strong fit to the data.¹ An overall R square for this model of .559, significant at the $p < .01$ level, indicated that a strong fit had been obtained. In other words, the independent variables included in the model were found to strongly predict higher levels of academic integration in the context of the overall model. There were several significant beta values among the control and independent variables. Black/African American, Hispanic/Latino, and Asian/Pacific Islander students were significantly more likely than White students to feel a sense of academic integration in the college. The high beta (.724) for faculty validation indicated that higher levels of faculty validation strongly predicted higher levels of academic integration among students. The squared semipartial (part) correlation of faculty validation with the dependent variable was .471 indicating that 47% of the variance in academic integration was explained by faculty validation after the other independent variables in the equation had been controlled.

Sub-Hypothesis 2a. This sub-hypothesis stated that, among community college students, higher levels of the faculty validation subconstructs predict

¹Muijs' (2004) criteria for fit are used throughout, i.e.: $< .1$ = poor fit; .11 to .3 = modest fit; .31 to .5 = moderate fit; $> .5$ = strong fit.

a stronger sense of academic integration in the college. Table 4 displays the results of a multiple linear regression designed to test this hypothesis.

An overall R square for the model of .603, significant at the $p < .01$ level, indicated that a strong fit had been obtained. The faculty validation sub-constructs were all significant predictors of academic integration. Among them, the strongest predictor of a sense of academic integration was *caring instruction* (beta = .507, $p < .01$), followed by *mentoring* (beta = .468, $p < .01$), *students being known and valued* (beta = .352, $p < .01$), and *appreciation for diversity* (beta = .255, $p < .01$).

Hypothesis 3. This hypothesis stated that, among community college students, higher levels of validation from faculty predict a stronger intent to persist in college. Table 5 displays the results of a multiple linear regression designed to test this hypothesis.

An overall R square for the model of .246, significant at the $p < .01$, level indicated that a modest fit had been 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 in the context of the overall model. There were several significant beta values among the control and independent variables. Hispanic/Latino and Black/African American students were significantly more likely to express an intent to return for the fall semester than White students. In addition, older students were significantly more likely to express their intent to persist than younger students. The moderately high, significant beta (.316) for faculty validation indicated that higher levels of faculty validation predicted stronger expressions of students' intent to return to college. The squared semipartial (part) correlation of faculty validation with the dependent variable was .089, indicating that 9% of the variance in intent to persist was explained by faculty validation after the other independent variables in the equation had been controlled.

Sub-hypothesis 3a. This sub-hypothesis stated that, among community college students, higher levels of faculty validation subconstructs predict a stronger intent to persist in college. Table 6 displays the results of a multiple linear regression designed to test this hypothesis.

An overall R square for the model of .256, significant at the $p < .01$, level indicated that a modest fit had been obtained. In other words, the independent variables included in the model modestly predicted a greater likelihood that students would express their intent to return to college for the subsequent semester in the context of the overall model. There were several significant beta values among the control and independent variables. Students from Hispanic/Latino and Black/African American racial/ethnic backgrounds were significantly more likely to express an intent to return for the fall semester than White students.

TABLE 2
SUMMARY OF EXPLORATORY PRINCIPAL COMPONENTS
RESULTS FOR FACULTY VALIDATION

(n = 253)

<i>Survey Items</i>	<i>Factor Loadings/Component</i>			
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
I feel accepted as a capable student by my instructors.	.719	.356	.210	.168
I feel accepted as a person by my instructors.	.630	.293	.076	.385
My instructors make me feel as though I bring valuable ideas to class.	.619	.390	.194	.130
My instructors know who I am.	.634	.129	.166	.176
My instructors understand that students come from different backgrounds.	.677	.145	.153	.113
My instructors are interested in what I have to offer in class.	.608	.145	.311	.215
I am encouraged by my instructors to openly share my views in class.	.577	.320	.283	.092
I can generally express my honest opinions in my classes.	.548	.254	.401	.098
I feel as though I am treated equal to other students.	.533	.293	.523	.074
My instructors generally remember my name.	.595	-.133	.255	.427
My instructors are easily accessible outside of their classrooms or offices.	.496	.171	.350	.097
My instructors show that they believe in my ability to do the class work.	.646	.457	.196	.152
My instructors are willing to take as long as needed to help me understand the class material.	.552	.528	.064	.097
It seems that my instructors really care about whether I am learning.	.585	.536	.061	.224
My instructors are willing to give me individual help when needed.	.513	.519	.134	.135
My instructors make an effort to make their classes interesting.	.410	.470	.325	.235
My instructors seem to genuinely care how I am doing.	.481	.549	-.042	.391
I interact with my instructors outside of class.	.185	.599	.222	.204
My instructors provide lots of written feedback on the assignments I turn in.	.195	.635	.381	.012
My instructors encourage students to become involved on campus.	.219	.486	.151	.350
I feel that my personal and family history is valued in class.	.146	.596	.481	.239
People of color are encouraged to contribute to the class discussion.	.318	.171	.733	.187
Women are encouraged to contribute to the class discussion.	.176	.184	.851	.148

I am encouraged to share life experiences when they relate to the class material.	.318	.374	.445	.272
I have had at least one instructor at this college who helped me to believe in myself.	.222	.127	.171	.730
At least one instructor has talked with me about my personal goals at this college.	.046	.326	.066	.689
I've had one or more instructors at this college whom I thought of as a mentor.	.238	.119	.173	.744
Eigenvalues	6.255	3.983	3.080	2.723
% of variance accounted for	23.17%	14.75%	11.41%	10.08%
<i>Interpretation</i>	Students known and valued	Caring instruction	Appreciation for diversity	Mentoring

TABLE 3
RESULTS OF MULTIPLE LINEAR REGRESSION
ANALYSIS USING FACULTY VALIDATION TO PREDICT
ACADEMIC INTEGRATION

(n = 134)

Variable	Coefficients		
	B	SE B	β
Age	.024	.018	.093
Gender	-.095	.229	-.027
Black/African American	1.058	.287	.276**
Hispanic/Latino	1.138	.355	.247**
Asian/Pacific Islander	.631	.312	.139*
Other (race/ethnicity)	.114	.745	.010
Mother's education	.060	.061	.066
Credit hours this semester	.021	.030	.043
College GPA	-.183	.210	-.059
Faculty validation	.062	.005	.724**
R ²	.559		
F		15.560**	

* $p < .05$

** $p < .01$

In addition, two of the faculty validation components significantly predicted students' intent to return to college for the subsequent semester. The *students known and valued* subconstruct garnered a beta of .213 ($p < .05$), while the *mentoring* subconstruct obtained a beta of .215 ($p < .05$). I also calculated the squared semipartial (part) correlation of the dependent variable with the subconstructs of faculty validation that were significant predictors of intent to persist. These indicated that, after the other independent variables in the equation had been controlled, 4% of the variance in intent to persist was explained by the *students known and valued* subconstruct, and 4% was explained by the *mentoring* subconstruct.

Hypothesis 4. This hypothesis stated that, among community college students, higher levels of academic integration in the college predict a stronger intent to persist in college. Table 7 displays the results of a multiple linear regression designed to test this hypothesis.

TABLE 4
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS
USING FACULTY VALIDATION FACTOR SCORES
TO PREDICT ACADEMIC INTEGRATION

(n = 134)

<i>Variable</i>	<i>Coefficients</i>		
	<i>B</i>	<i>SE B</i>	β
Age	.015	.017	.059
Gender	-.084	.222	-.023
Black/African American	.940	.286	.245**
Hispanic/Latino	1.035	.344	.225**
Asian/Pacific Islander	.375	.329	.083
Other (race/ethnicity)	-.247	.727	-.021
Mother's education	.088	.059	.098
Credit hours this semester	.038	.029	.080
College GPA	-.207	.203	-.066
Faculty validation sub-construct: students known and valued	.667	.118	.352**
Faculty validation sub-construct: caring instruction	.933	.120	.507**
Faculty validation sub-construct: appreciation for diversity	.478	.105	.255**
Faculty validation sub-construct: mentoring	.843	.109	.468**
R^2	.603		
F		13.993**	

* $p < .05$
** $p < .01$

An overall R square for the model of .293, significant at the $p < .01$ level, indicated that a modest fit had been obtained. In other words, the independent variables included in the model modestly predicted a greater likelihood that students would express their intent to persist in college for the subsequent semester in the context of the overall model. There were several significant beta values among the control and independent variables. Hispanic/Latino students were significantly more likely to express an intent to return for the fall semester than White students.

TABLE 5
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS
USING FACULTY VALIDATION TO PREDICT INTENT TO PERSIST
 (n = 134)

Variable	B	Coefficients SE B	β
Age	.047	.023	.184*
Gender	-.401	.293	-.115
Black/African American	.970	.367	.258**
Hispanic/Latino	1.448	.454	.321**
Asian/Pacific Islander	.660	.399	.149
Other (race/ethnicity)	-1.153	.953	-.099
Mother's education	.132	.078	.194
Credit hours this semester	-.053	.038	-.113
College GPA	-.314	.269	-.103
Faculty validation	.026	.007	.316**
R ²		.246	
F		4.018**	

* $p < .05$
 ** $p < .01$

The moderately high, significant beta (.399) for academic integration indicated that higher levels predicted stronger expressions of students' intent to return to college. The squared semipartial (part) correlation of academic integration with the dependent variable was .144 indicating that 14% of the variance in intent to persist was explained by academic integration after the other independent variables in the equation had been controlled.

Hypothesis 5. This hypothesis stated that the effect of faculty validation on intent to persist is indirect and is mediated by students' sense of academic integration in the college. Table 8 displays the results of a multiple linear regression designed to test this hypothesis.

An overall R square for the model of .296, significant at the $p < .01$ level, indicated that a modest fit had been obtained. Of particular interest in this regression equation were the relative values of the betas for faculty validation and academic integration. In the context of this model, academic integration garnered a significant beta value (beta = .334, $p = .004$), while the beta for faculty validation was non-significant (beta = .074, $p = .520$).

TABLE 6
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS
USING FACULTY VALIDATION FACTOR SCORES
TO PREDICT INTENT TO PERSIST

(n = 134)

<i>Variable</i>	<i>Coefficients</i>		
	<i>B</i>	<i>SE B</i>	β
Age	.043	.023	.168
Gender	-.417	.298	-.119
Black/African American	1.020	.383	.272*
Hispanic/Latino	1.459	.461	.323**
Asian/Pacific Islander	.721	.442	.162
Other (race/ethnicity)	-1.169	.975	-.100
Mother's education	.131	.080	.148
Credit hours this semester	-.052	.039	-.111
College GPA	-.343	.272	-.112
Faculty validation sub-construct: students known and valued	.386	.160	.213*
Faculty validation sub-construct: caring instruction	.271	.164	.148
Faculty validation sub-construct: appreciation for diversity	.198	.142	.112
Faculty validation sub-construct: mentoring	.380	.147	.215*
R^2		.256	
F		3.171**	

* $p < .05$
** $p < .01$

The findings related to Hypotheses 3 and 4 indicated that faculty validation and academic integration each significantly predicted intent to persist. When they were both used as independent variables in one regression equation, however, only academic integration significantly predicted intent to persist. Very little was added to this final model by the inclusion of faculty validation. It can be concluded that, while both variables contributed to the

TABLE 7
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS
USING ACADEMIC INTEGRATION
TO PREDICT INTENT TO PERSIST

(n = 157)

Variable	B	Coefficients SE B	β
Age	.039	.021	.144
Gender	-.243	.261	-.068
Black/African American	.495	.345	.129
Hispanic/Latino	.821	.400	.183*
Asian/Pacific Islander	.368	.362	.083
Other (race/ethnicity)	-1.114	.675	-.122
Mother's education	.067	.068	.076
Credit hours this semester	-.062	.035	-.128
College GPA	-.347	.220	-.120
Academic integration	.374	.069	.399**
R^2		.293	
F		6.040 **	

* $p < .05$
** $p < .01$

model predicting intent to persist, academic integration had a direct effect, while faculty validation had an indirect effect on intent to persist, mediated by students' sense of academic integration.

CONCLUSIONS AND IMPLICATIONS

A summary of the findings of this research appears in Figure 2, which displays the relationships between faculty validation (a form of faculty-student interaction as described by Tinto, 1993), academic integration, and intent to persist. Four subconstructs of faculty validation emerged through principal components analysis, with items loading onto the following components: *students known and valued*, *caring instruction*, *appreciation for diversity*, and *mentoring*.

TABLE 8
RESULTS OF MULTIPLE LINEAR REGRESSION ANALYSIS
USING FACULTY VALIDATION AND ACADEMIC INTEGRATION
TO PREDICT INTENT TO PERSIST

(n = 134)

Variable	Coefficients		
	B	SE B	β
Age	.039	.022	.153
Gender	-.370	.285	-.106
Black/African American	.624	.376	.166
Hispanic/Latino	1.075	.459	.238*
Asian/Pacific Islander	.454	.394	.102
Other (race/ethnicity)	-1.191	.925	-.102
Mother's education	.112	.076	.127
Credit hours this semester	-.060	.037	-.127
College GPA	-.254	.262	-.083
Faculty validation	.006	.010	.074
Academic integration	.327	.112	.334**
R^2		.296	
F		6.653 **	

* $p < .05$ ** $p < .01$

After controlling for students' age, gender, race/ethnicity, mother's education, number of credits taken in the semester, and college GPA, faculty validation was found to strongly predict students' sense of academic integration in college. The presence of each of the subconstructs of faculty validation predicted academic integration at a moderate to strong level, with *caring instruction* as the strongest predictor.

Higher levels of faculty validation modestly predicted increases in students' intent to persist. Further, two subconstructs of faculty validation significantly predicted intent to persist—*students known and valued* and *mentoring*. Students' sense of academic integration modestly predicted intent to persist.

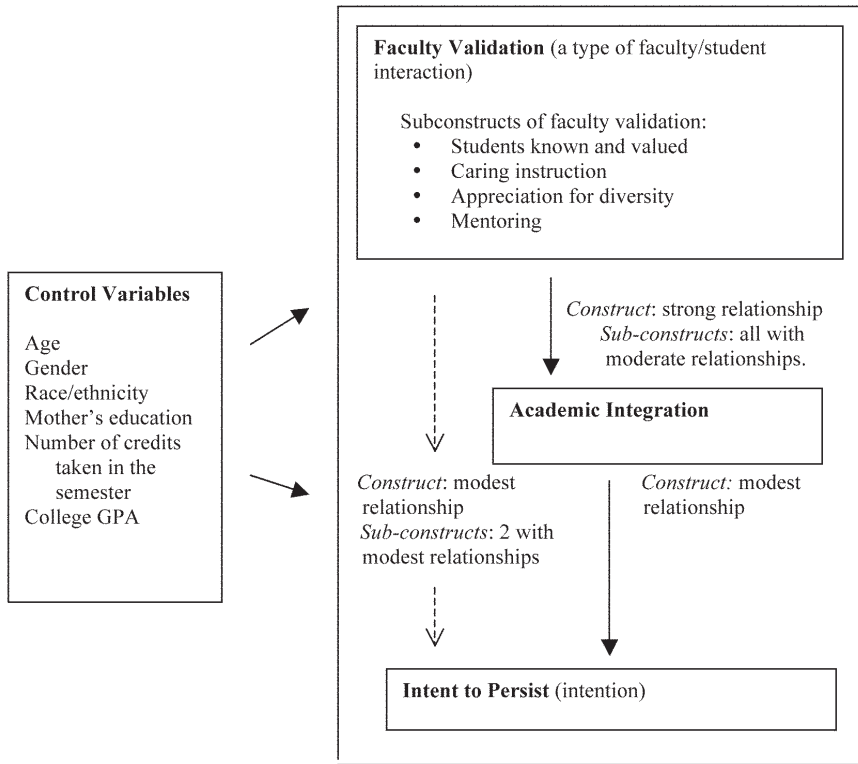


Figure 2. Conceptual framework for this research including significant relationships found.

Note: Solid arrows indicate direct relationships; dashed arrows indicate indirect relationships.

Faculty validation's effect on intent to persist was indirect, mediated through students' sense of academic integration.

This research builds on the extensive literature about students' sense of integration and how it influences decisions related to persistence (Braxton, 2002). It also builds on studies that emphasize the ways that student-faculty interaction affect persistence. Of particular importance is the work of Rendón (1994, 2002) and others, who emphasize validation by faculty and others in the college community as a central influence on student persistence and success. This research made five specific contributions to theory:

1. It provided empirical support for Rendón's (1994, 2002) proposition that validation influences student persistence in college.

2. It elaborated Tinto's (1993) interactionist theory of student departure. Specifically this research empirically tested and supported two of the theory's propositions—that faculty-student interactions influence academic integration and that academic integration influences students' intent to persist.

3. The term *integration* is widely and divergently used and leads to research findings that are difficult to interpret and inconsistent (Braxton & Hirschy, 2005; Hurtado & Carter, 1997; Kraemer, 1997; Tinto, 1997). This study defined and operationalized "academic integration" in alignment with one definition offered by Tinto (1993), a sense of "competent membership" (p. 208). This definition not only accurately reflected Tinto's intent but also facilitated its measurement and yielded significant findings in relation to its ability to predict intent to persist in college.

4. This study identified subconstructs of faculty validation, leading to a better understanding of its meaning.

5. Finally, the study contributed to a better understanding of predictors of persistence among community college students.

An important implication of this research is that faculty actions can make a difference. At Midwest College, students experiencing faculty validation were more likely to feel academically integrated and to express their intent to continue their education. When considering the subconstructs of faculty validation that best predicted a sense of integration, *caring instruction* was most important, although *mentoring*, *students known and valued*, and *appreciation for diversity* were also significant predictors. When considering the subconstructs of faculty validation that best predicted intent to persist, both *mentoring* and *students known and valued* were important predictors. Specific implications for practice are as follows:

1. Validation by faculty significantly predicted students' sense of academic integration and intent to persist in college. These findings are especially pertinent to community colleges as institutions where students' primary opportunities to engage with the college environment occur in the classroom through interactions with faculty. Community colleges may want to make special efforts to help faculty to engage more fully with, and validate, their students.

2. Many of the specific items in the study pertaining to faculty validation involve skills that faculty can cultivate. In the case of some dimensions of this construct, it may be sufficient to raise awareness among instructors of the impact of extra efforts to, for example, ask students to share their life experiences, get to know students' names, encourage their involvement on campus, or show that students are accepted as capable learners.

3. Active institutional efforts to increase the validation of students by faculty may contribute to increased student persistence. Examples of ways that this could be accomplished include: (a) the use of financial or other incentives to faculty to increase their out-of-class availability to students or to

incorporate course-based projects that allow students to draw on their own history; (b) professional development on the importance of, and approaches to, validation of students; and (c) redefining faculty roles and responsibilities to include validation of students.

4. Graduate schools can provide opportunities for future faculty members to better understand ways to encourage the success and persistence of their students by actively validating them.

Further research is certainly needed to better understand the influence of validation on student experiences and outcomes, since this study was conducted at a single two-year institution and cannot be widely generalized. Research in other settings and with other populations (e.g., developmental education students, students at four-year colleges, students in other regions) would be useful, as would research that delves more deeply into the faculty validation subconstructs, particularly the types and intensity needed to influence student outcomes. In addition, research in which interventions involving faculty validation are implemented and their impact measured is recommended.

CONCLUSION

In 1982, Tinto stated, “Simply put, the more time faculty give to their students . . . the more likely are students to complete their educations” (p. 697). Despite this conclusion, his work and that of other researchers has focused predominantly on other influences on college student persistence, and there has been little evidence that faculty actions in the classroom influence students’ persistence-related decisions. Perhaps, the time has come to change these priorities. Findings from my research indicate that faculty/student interaction involving validation of the type described by Rendón (1994, 2002) and others influences students’ sense of academic integration, which, in turn, influences intent to persist. Further action—and research—on faculty validation could lead to important improvements in student persistence and completion.

APPENDIX A

TECHNICAL NOTES ON KEY VARIABLES

Developing a survey instrument was a central focus of this research. It was created to obtain the data necessary to test the study’s five hypotheses and two subhypotheses. To this end, I operationalized and measured the following variables: (a) faculty validation, (b) intent to persist in college, and (c) academic integration, defined as “competent membership.” Previous research using survey instruments has been done on academic integration; for this construct, I used scales that had been tested for

validity and reliability (e.g., Hurtado & Carter, 1997; Johnson, Johnson, Buckman, & Richards, 1985; Roeser, Midgley, & Urdan, 1996). However, no previous survey research had been conducted on faculty validation. While existing scales dealt with student interactions with faculty (see postsecondary student surveys in Steiner, Hassel, & Tepper, 2004), I found none that measured students' perceptions of faculty validation, i.e., where faculty took the initiative to provide validating experiences to students. Therefore it was necessary to develop a scale for this purpose. In addition, I took steps to assess the reliability and validity (a) of the newly developed scale for faculty validation, (b) of the previously existing measures used for persistence and academic integration, and (c) of the survey instrument as a whole.

The Intent to Persist Variable: 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, I asked students to respond to one item, "I am planning on returning to this college for the fall 2006 semester."

For the purposes of this study, it was important to examine intent to persist only for those students who were not graduating at the end of the spring 2006 semester. I therefore added an item to find out whether and when students expected to graduate from Midwest College. I eliminated those who expected to graduate by the end of the semester from the sample for the multiple linear regression analyses.

To justify the use of intent to persist as a dependent variable, I also wished to assess the extent to which intent to persist predicted actual persistence behavior. Braxton, Milem, and Sullivan (2000) refer to a substantial body of research (e.g., Bean, 1983; Cabrera, Castaneda, Nora, & Hengstler, 1992; Pascarella, Duby, & Iverson, 1983; Voorhees, 1987) that demonstrates a strong relationship between intent to persist and actual persistence. To further verify the relationship between intent to persist and actual persistence, I asked the students who participated in this study to authorize me to contact them at the beginning of the fall 2006 semester to ascertain whether they were actually enrolled in college for the semester. Students willing to be contacted (49%) provided their telephone number and an email address. I used this information to assess the strength of the relationship between expressions of intent and actual persistence to the next semester among students in this study, providing evidence of the construct validity of the item used in the instrument.

Because it was possible that students who agreed to be contacted were different from those who did not agree, I compared those who agreed to be contacted with those who did not on the variables used as controls in this study. To examine the differences between the two groups with regard to age, college GPA, and the number of credits in which students were enrolled for the semester, I ran independent sample T-tests comparing students who agreed to be contacted with those who did not. To look at differences with regard to gender, race/ethnicity, and mother's education, I performed Pearson's chi-square tests comparing the two groups. The only significant difference was that students willing to be contacted were somewhat more likely to be enrolled in more credit hours (an average of 11.9 versus an average of 10.7 hours). Overall, the two groups of students were sufficiently alike to proceed with the analysis.

In September 2006, I made follow-up emails and telephone calls to the students who had agreed to be contacted. Of the 63 students who could be reached, 44 students reported being enrolled at Midwest College in the fall of 2006, while 19 were not. Of those who were not, 11 were enrolled in other colleges or universities. Of the 63 students from whom information was obtained, all had responded to the item regarding their intent to return to Midwest College (“I am planning on returning to this college for the fall 2006 semester.”). Of these respondents, 51 expressed the intent to return to Midwest College (responding 5–7, agree to very strongly agree), 7 did not plan to (responding 1–3, very strongly disagree to disagree) and 5 were ambivalent (4, neutral).

To assess the strength of the relationship between intent to persist and actual persistence, students were classified as planning to return (responses 5–7 on the survey) or not planning to return/neutral (responses 1–4). These responses were correlated with their actual (reported) enrollment at Midwest College using Pearson’s Product Moment Correlation. This resulted in an r value of .474 ($p < .01$, $n = 63$), indicating a fair to moderate relationship (Fink, 1995) between intention to persist and actual persistence.

Academic Integration Variable: Academic integration is defined in this research as a sense of “competent membership” in the college community (Tinto, 1993). Based on extensive consideration of the way that this term appeared in Tinto’s writings over almost three decades, I decided to define a sense of membership as a sense of belonging, and a sense of competence as a sense of academic self-efficacy, or the belief that one could be an effective student and master the associated tasks.

I conducted a search of existing student surveys designed to capture different aspects of the college experience to find scales measuring both *competence* (or academic self-efficacy) and *membership* (or belonging) for which there was evidence of validity and reliability. Examples included the Community College Survey of Student Engagement (CCSSE, 2005), the Community College Student Experiences Questionnaire (Center for Postsecondary Research and Planning, 1998), the Cooperative Institutional Research Program Freshman Survey (Higher Education Research Institute, 2003), the College Student Survey (Higher Education Research Institute, 2003), Your First College Year Survey (Higher Education Research Institute, 2003), National Survey of Student Engagement (Center for Postsecondary Research and Planning, 2003), Student Satisfaction Inventory (Levitz, 2000). I found no single survey with adequate scales for both.

Among those measuring *competence*, a survey with a useful scale was found in a study undertaken by Roeser, Midgley, and Urdan (1996) on “the role of personal achievement goals and feelings of school belonging in mediating the relation between perceptions of the school psychological environment and school-related beliefs, affect, and achievement” (p. 408). That study, conducted in eighth-grade classrooms, used “academic self-efficacy” (p. 422) in a way that paralleled Tinto’s (1993) “competence.” There were six items in the academic self-efficacy scale, and the alpha obtained in its use in the original study was .76.

Appendix Table 1 shows the original items and their adaptation for the purposes of my study. These items served as both independent (hypothesis 4) and dependent variables (hypotheses 2 and 5 and subhypothesis 2a) for my study.

Roeser, Midgley, and Urdan's (1996) research also included a scale for *belonging* comprised of four items that yielded an alpha of .76 in the original study. I used this scale in the pilot test, which resulted in an alpha of .71. Seeking to improve the instrument, I did a further search for an appropriate scale and decided to use one developed by Hurtado and Carter (1997) in a study of Latino college students' sense of belonging in relation to college transition and campus racial climate. Their alpha was .94. I used the items exactly as they appeared in the Hurtado and Carter scale, although with a seven-point response scale rather than Hurtado and Carter's eleven-point response scale. The three items were: (a) I see myself as a part of the campus community; (b) I feel that I am a member of the campus community; and (c) I feel a sense of belonging to the campus community.

Faculty Validation Variable: As noted previously, I could not find an existing scale for faculty validation of students despite an extensive search of existing instruments developed to measure students' experiences in higher education and of the research literature dealing with student-faculty interaction (e.g., CCSSE, 2002; Kuh, 2003; Lamport, 1993; Lundquist, Spalding, & Landrum, 2002; Nora & Cabrera, 1996; Pascarella, Terenzini, & Hibel, 1978; Steiner, Hassel, & Tepper, 2004). Similar instruments found in the literature asked about student interactions with faculty or about what students did or did not do in regard to seeking out faculty assistance. Rendón (1994, 1995, 2000) is very explicit in stating that validation involves action initiated by "validating agents" (Rendón, 1994, p. 44), such as faculty members.

Therefore, testing the hypotheses developed for this research project required creating a scale that could be used to measure validation by faculty. To enhance its ability to produce valid and reliable results, I employed methods proposed by experts in the field of measurement (Dawis, 1987; Devellis, 1993; Ebel & Frisbie, 1991; Framboise & Coleman, 1991; Kuh, 2001; Messick, 1995; Pope & Mueller, 2000). The multi-stage process used to develop the scale involved: (a) the creation of items based on the literature, (b) a review of the items by national experts on student development and student persistence in postsecondary education, (c) the selection of items, and 4) the use of multiple measures to assess their performance.

First, I developed a set of 55 items that reflected faculty validation as described by Rendón (1994, 2002), Rendón and Garza (1996), Rendón and Jalomo (1995), and Rendón, Jalomo, and Nora (2000). Devellis (1993) recommends generating two to three times the number of items that are desired in the final scale.

Subsequently, to narrow down the items and improve the content validity of the scale, I sent these items to a panel of 10 experts, including scholars of student persistence in college and community college faculty and student development specialists. I gave them a short summary of validation descriptions (Rendón, 1994, 2002; Rendón, & Garza, 1996; Rendón & Jalomo, 1995; Rendón, Jalomo, & Nora, 2000), and asked them to rate each of the 55 items on both pertinence to the topic and clarity (Framboise & Coleman, 1991; Pope & Mueller, 2000). I received item-by-item responses from:

1. Andrea Bueschel, Research Scholar, Carnegie Foundation for the Advancement of Teaching, Stanford, California.

2. Elise Davis-McFarland, Vice President for Student Services and Dean of Students, Trident Technical College, Charleston, South Carolina.

APPENDIX TABLE 1
ITEMS USED IN COMPETENCE SCALE

<i>Items from Roeser, Midgley, & Urdan Research (1996)</i>	<i>Items as Adapted for This Study</i>
I'm certain I can master the skills taught in school this year.	I'm certain I can master the skills taught at this college.
I can do even the hardest school work if I try.	I can do even the hardest coursework if I try.
If I have enough time, I can do a good job on all my school work.	If I have enough time, I can do a good job on all of my coursework.
I can do almost all the work in school if I don't give up.	I can do almost all the work in college if I don't give up.
Even if the work in school is hard, I can learn it.	Even if the work in my classes is hard, I can learn it.
I'm certain I can figure out how to do the most difficult school work.	I'm certain I can figure out how to do the most difficult coursework.

3. Debbie Derr, Vice President for Learner Success, Madison Area Technical College, Madison, Wisconsin.

4. Faye Fullerton, Vice President, Student Services, Lincoln Land Community College, Springfield, Illinois.

5. George Kuh, Chancellor's Professor of Higher Education and Director, Center for Postsecondary Research, Indiana University—Bloomington, Indiana.

6. George Smith, Campus Counselor, Student Development, Greenville College, Greenville, Illinois.

7. Barbara Townsend, Professor of Higher Education in the Department of Educational Leadership and Policy Analysis, University of Missouri, Columbia, Missouri.

In addition, I received more general suggestions and comments from Laura Rendón, Romero Jalomo, and Amaury Nora in response to my request. I tabulated the results of these ratings and gave the comments careful consideration. In general, I used the best-rated items to create a final scale for faculty validation with a total of 27 items. I also included several moderately rated items to insure coverage of important dimensions of the faculty validation construct emphasized by Rendón and others.

I also sought evidence of convergent validity by correlating the results of an existing, well-researched scale with those obtained from the newly created scale following Dawis's (1987) recommendations that an existing scale similar in content to the one under development be integrated into a survey instrument and administered

concurrently with the new one. For this purpose, I requested permission from Kay McClenney, Director of the Community College Survey on Student Engagement, to use a seven-item scale on student-faculty interaction from the survey. This survey has been extensively tested for validity and reliability (Marti, 2005), and the student-faculty interaction scale had garnered an alpha of .73 in previous research. Based on its subject matter, I would expect student responses to this scale to vary in a way that closely parallels the newly created scale. McClenney granted permission to use the items in this study, and I correlated the summated responses to this scale with those of the validation scale developed in this research. I used Pearson Product Moment Correlation to calculate the strength of the relationship between the two scales, obtaining an r value of .53 ($p < .01$). This value indicates that the scales are related—as they should be, since they both measure interactions of students and faculty. Yet this level of correlation is moderate (Fink, 1995), indicating that the scales also differ in what they measure.

I undertook two additional steps to increase the likelihood that I was using a valid and reliable set of items to measure faculty validation. First, I ran item-to-total-score correlations for the items in this scale as recommended by Pope and Muller (2000). They recommend that items not well correlated (less than .2) be examined and possibly removed from the scale before further analysis. I performed this analysis for the faculty validation scale using Pearson's Product Moment Correlation. There were no items in the scale with a correlation of less than .5 with the overall scale, indicating that all should be kept. Second, Kuh (2001) suggests assessing scale items for skewness and considering removing items with a skewness statistic of over 1. One item slightly surpassed this number (1.04). I did not remove it.

APPENDIX B
COLLEGE EXPERIENCE SURVEY
MIDWEST COLLEGE
SPRING 2006

You have the right to not answer any or all of the questions in this survey. This first page will cover your answers so that no one else will see what you have said. We are gathering information on how college experiences affect students' feelings about being able to succeed in college. Please share information about your own experiences. Your answers will be kept confidential. [*Editor's note: The survey has been reformatted to conserve space.*]

CIRCLE THE ONE ANSWER THAT FITS BEST:

When I think about the classes I have taken at this college, I would say that . . .	<i>Very strongly disagree</i>	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>	<i>Very strongly agree</i>
1. I have had at least one instructor at this college who helped me to believe in myself.	1	2	3	4	5	6	7
2. I feel accepted as a person by my instructors.	1	2	3	4	5	6	7
3. At least one instructor has talked with me about my personal goals at this college.	1	2	3	4	5	6	7
4. My instructors seem to genuinely care how I am doing.	1	2	3	4	5	6	7
5. My instructors understand that students come from different backgrounds.	1	2	3	4	5	6	7
6. Most instructors are interested in what I have to offer in class.	1	2	3	4	5	6	7
7. I am encouraged by my instructors to openly share my views in class.	1	2	3	4	5	6	7
8. My instructors show that they believe in my ability to do the class work.	1	2	3	4	5	6	7
9. My instructors know who I am.	1	2	3	4	5	6	7

When I think about the classes I have taken at this college, I would say that ...	<i>Very strongly disagree</i>	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>	<i>Very strongly agree</i>
10. My instructors are willing to take as long as needed to help me understand the class material.	1	2	3	4	5	6	7
11. I feel accepted as a capable student by my instructors.	1	2	3	4	5	6	7
12. My instructors make me feel as though I bring valuable ideas to class.	1	2	3	4	5	6	7
13. I interact with my instructors outside of class.	1	2	3	4	5	6	7
14. My instructors are willing to give me individual help when needed.	1	2	3	4	5	6	7
15. Even if the work in my classes is hard, I can learn it.	1	2	3	4	5	6	7
16. It seems like my instructors really care about whether I am learning.	1	2	3	4	5	6	7
17. People of color are encouraged to contribute to the class discussion.	1	2	3	4	5	6	7

CIRCLE THE ONE ANSWER THAT FITS BEST:

When I think about the classes I have taken at this college, I would say that ...	<i>Very strongly disagree</i>	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>	<i>Very strongly agree</i>
18. If I have enough time, I can do a good job on all of my coursework.	1	2	3	4	5	6	7
19. I am encouraged to share life experiences when they relate to the class material.	1	2	3	4	5	6	7
20. I can generally express my honest opinions in my classes.	1	2	3	4	5	6	7

21. My instructors provide lots of written feedback on the assignments I turn in.	1	2	3	4	5	6	7
22. I feel like my personal and family history is valued in class.	1	2	3	4	5	6	7
23. Women are encouraged to contribute to the class discussion.	1	2	3	4	5	6	7
24. I feel as though I am treated equally to other students.	1	2	3	4	5	6	7
25. My instructors make an effort to make their classes interesting.	1	2	3	4	5	6	7

CIRCLE THE ONE ANSWER THAT FITS BEST:

When I think about this college in general, I would say that . . .	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
26. I see myself as a part of the campus community.	1	2	3	4	5	6	7
27. I'm certain I can do almost all the work in college if I don't give up.	1	2	3	4	5	6	7
28. My instructors encourage students to become involved on campus.	1	2	3	4	5	6	7
29. I'm certain I can master the skills taught at this college.	1	2	3	4	5	6	7
30. I am planning on returning to this college for the Fall 2006 semester.	1	2	3	4	5	6	7
31. I can do almost all the work in college if I don't give up.	1	2	3	4	5	6	7
32. I feel that I am a member of the campus community.	1	2	3	4	5	6	7
33. I expect to complete a degree or certificate at this college.	1	2	3	4	5	6	7

When I think about this college in general, I would say that . . .	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
34. I feel a sense of belonging to the campus community.	1	2	3	4	5	6	7
35. My instructors are easily accessible outside of their classrooms or offices.	1	2	3	4	5	6	7
36. I can do even the hardest coursework if I try.	1	2	3	4	5	6	7
37. I've had one or more instructors at this college whom I thought of as a mentor.	1	2	3	4	5	6	7
38. My instructors generally remember my name.	1	2	3	4	5	6	7
39. I'm certain I can figure out how to do the most difficult coursework.	1	2	3	4	5	6	7

CIRCLE THE ONE ANSWER THAT FITS BEST:

In your experiences at this college, how often have you done each of the following:	Very often	Often	Sometimes	Never
Used email to communicate with an instructor	1	2	3	4
<i>Discussed grades or assignments with an instructor</i>	1	2	3	4
Talked about career plans with an instructor or advisor	1	2	3	4
Discussed ideas from your readings or classes with instructors outside of class	1	2	3	4
Received prompt feedback (written or oral) from instructors on your performance	1	2	3	4
Worked with instructors on activities other than coursework	1	2	3	4

Please share some information about you:

- a. What is your gender?
 Male
 Female
- b. What is your racial/ethnic background (mark the one best response)?
 White
 Black or African American
 Hispanic/Latino
 Asian or Pacific Islander
 American Indian or Alaska Native
 Other _____
- c. What is your age? _____
- d. I last attended high school in _____ and my high school GPA was _____.
(city/state/country)
- e. When did you first start taking courses at this college? Month/year _____
- f. Over the entire time you have been enrolled in college (here and elsewhere), how many college credit hours have you earned? _____
- g. How many college credit hours are you taking this semester? _____
- h. What is your overall college GPA? _____
- i. What is (or will be) your college major? _____
- j. For the purposes of this research, we would like to know whether you return to college in Fall 2006. May we call you next fall to see whether you are enrolled?
 No, I would prefer not to share this information.
 Yes, I _____ can be reached at _____ or _____
(first name) (phone number)

(email)
- k. Which statement best describes the highest level your parents reached in school (check one for each parent).

	Mother	Father
Did not attend high school.....	___	___
Attended but didn't finish high school.....	___	___
Completed high school.....	___	___
Completed some college.....	___	___
Earned an associate's degree.....	___	___
Earned a bachelor's degree.....	___	___
Earned a graduate degree.....	___	___
Don't know.....	___	___

- l. I expect to complete a degree or certificate from this college (check one):
 At the end of this semester.
 Within one year.
 In more than a year, but less than two years.
 In more than two years.
 I don't expect to complete a degree or certificate.

THANK YOU FOR PARTICIPATING IN THIS STUDY!!

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