VALIDATION EXPERIENCES AND PERSISTENCE AMONG URBAN
COMMUNITY COLLEGE STUDENTS

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Dissertation Abstract Submitted to
The Institute for Community College Research
May 2007

Defended: November 7, 2006

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Abstract

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). While they leave prematurely from all types of colleges and universities, some 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 [NCES], 2002). However, less than one-third of students 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 as well as their potential for lost revenue. 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).

Early departure is much more common among some groups of students 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 as compared to 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 (Cohen & Brawer). Finally, community college students are less likely to be academically prepared for college as indicated by SAT composite scores averaging 839 for students intending to enter 2-year colleges as compared with 961 for students expecting to enter bachelor's level institutions (NCES, 2001, as cited in Cohen & Brawer, 2003).

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; Pascarella & Terenzini, 2005; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1996; Tinto, 1993, 1998, 2004). They posit that integration or involvement in college is predictive of higher rates of retention, and that it often flows naturally from living in residence halls, participation in college courses, and engagement in campus activities. Most frequently cited among these scholars is Tinto, whose interactionalist model of student departure from college holds nearly paradigmatic status (Braxton, 2002).

Rendon (1994, 2002) questioned whether integration of this kind is always the most important influence on student retention. She contended that, for nontraditional and underserved students, *validation* may be more important for student success and persistence. Defining 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 ability to succeed in the college environment, she delineated a number of reasons why this kind of interaction may be especially important for certain groups of students. She argued that students who have not grown up assuming they would go to college may not have enough comfort with, and knowledge of, college environments to become readily integrated without additional assistance.

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Whereas Rendon (1994, 2002) offered validation as an *alternative* to integration, it may also be viewed as a *precondition* for integration. In other words, faculty may reach out to students in ways that lead them to feel more integrated. Examples could include talking with students about their personal goals, showing them that their personal and cultural history is valued, or taking extra time to help students learn class material. Tinto does not emphasize the role of validation, but he does recognize its potential importance in 2-year and non-residential institutions and among nontraditional students (Tinto, 1997, 1998). Further, 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, this study was designed as an elaboration of aspects of Tinto's Longitudinal Model of Institutional Departure, specifically an investigation into the relationships shown in the darkened boxes in Figure 1. In this research, Rendon's (1994, 2002) validation construct is explored as a type of faculty/staff validation that predicts students' integration and their intent to persist in college.
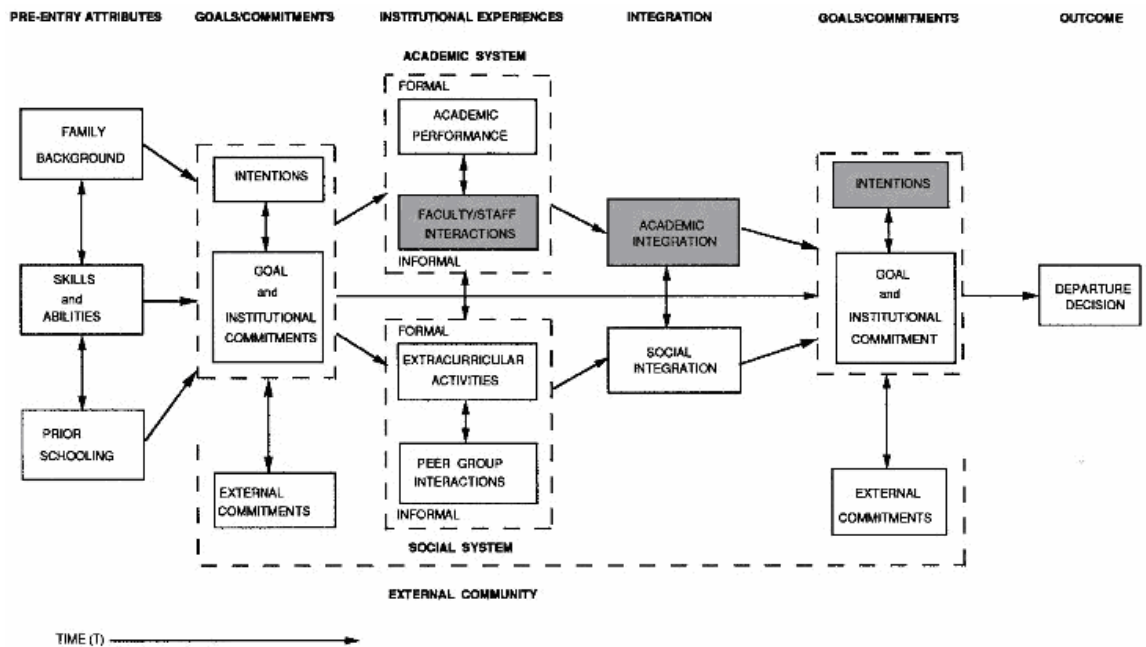

Figure 1. Relationships of interest in Tinto's Longitudinal Model of Institutional Departure.

Note. From *Leaving College: Rethinking the Causes and Cures of Student Attrition* (p. 114), by V. Tinto, 1993, Chicago: University of Chicago Press. Copyright 1993 by The University of Chicago. [Reprinted with permission]

The purpose of this research was to examine the extent to which urban community college students' experiences with validation by faculty contributed to their sense of integration in college and whether this, in turn, contributed to their intent to persist in college. This study focused on urban community college students' *validating experiences* in their interactions with college faculty as described by Rendon (1994, 2002), Rendon and Garza (1996), Rendon and Jalomo (1995), and Rendon, Jalomo, and Nora (2000). These experiences were considered in relation to *integration*, defined as a sense of competent membership (Tinto, 1993), to determine whether students who were more validated were also more integrated and/or more likely to express the intent to persist (Tinto). It was also designed to better understand the different types of validation that students experienced. The significance of this research was its contribution to the theoretical understanding of college student departure decisions as well as its potential to guide practice within community colleges.

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

1. Faculty validation has discernable sub-constructs.

2. Among urban community college students, higher levels of faculty validation predict a stronger sense of integration, or competent membership in the college.

   2a. Sub-hypothesis: Among urban community college students, higher levels of faculty validation sub-constructs predict a stronger sense of integration, or competent membership in the college.

3. Among urban community college students, higher levels of validation from faculty predict a stronger intent to persist in college.

   3a. Sub-hypothesis: Among urban community college students, higher levels of faculty validation sub-constructs predict a stronger intent to persist in college.

4. Among urban community college students, higher levels of integration (or competent membership) 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 integration (or competent membership) in the college.

Method

Prior research (e.g., Rendon, 1994; Rendon & Jalomo, 1995; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1996) on student validation in the community college 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 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 Rendon (1994, 2002). As no previous instrument existed to measure students' perceptions of faculty validation, the creation and validation of an instrument was an important aspect of this dissertation research.

The instrument was developed using rigorous methods (Dawis, 1987; Devellis, 1993; Dillman, 2000: Ebel & Frisbie, 1991; Kuh, 2001; Messick, 1995; Pope & Mueller, 2000) to insure its validity and reliability, with a particular focus on the creation of a scale to measure faculty validation. Scale development involved: (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.

A criticism of single institution studies is that they reflect the conditions of a specific institution, thus limiting generalizeability (Bailey & Alfonso, 2005). However, for exploratory research such as this, there are advantages to working in one institution. Research conducted within 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. Considering these advantages, one demographically diverse, urban community college—Midwest College—was selected. The student population of interest consisted of all students attending credit-bearing classes. Introductory college-level English (101, 102) classes offered during Spring 2006. were selected for inclusion in the study because students in these required classes were 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). A total of 333 students from 22 English classes at Midwest College was surveyed.

To assess hypothesis 1, exploratory principle components analysis was used to identify sub-constructs of faculty validation. To assess the other hypotheses and sub-hypotheses, multiple linear regression analyses were conducted evaluating the extent to which: 1) faculty validation predicted integration and intent to persist, 2) faculty validation sub-constructs predicted integration and intent to persist, 3) integration predicted intent to persist, and 4) faculty validation influenced intent to persist indirectly, via integration. In the multiple linear regression analyses age, gender, race/ethnicity, mothers' education, college GPA, and the number of credit hours in which the student was enrolled during the semester were controlled.

As an added dimension of this study, an assessment was made of the strength of the connection between intent to persist and actual persistence. A sample of students was contacted by telephone and email in the Fall of 2006 to see whether they had actually returned to Midwest College for the fall semester. Among those contacted, a moderate relationship (Jaeger, 1993) was found between intent to persist and actual persistence at $r = .474$ and significant at the $p < .01$ level.

Findings

Hypothesis 1. This hypothesis stated that faculty validation has discernible sub-constructs. Exploratory principal components analysis revealed four sub-constructs or components (with Eigenvalues over 1) related to faculty validation that explained a substantial proportion of total variation: (a) *students known and valued* explained 23.2% of the variation, (b) *good instruction* explained 14.8% of the variation, (c) *appreciation for diversity* explained 11.4% of the variation, and (d) *mentoring* explained 10.1% of the variation, for a total of 59.5% explained.

Hypothesis 2. This hypothesis stated that, among urban community college students, higher levels of faculty validation predict a stronger sense of integration, or competent membership in the college. Using criteria for extent of fit proposed by Muijs (2004; this criteria was used throughout), an overall R square for this model of .559, significant at the $p < .01$ level, indicated that a strong fit had been obtained.

Sub-Hypothesis 2a. This sub-hypothesis stated that, among urban community college students, higher levels of faculty validation sub-constructs predict a stronger sense of integration, or competent membership in the college. 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 competent membership. Among them, the strongest predictor of a sense of competent membership was *good 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 urban community college students, higher levels of validation from faculty predict a stronger intent to persist in college. An overall R square for the model of .246, significant at the $p < .01$ level, indicated that a modest fit had been obtained.

Sub-Hypothesis 3a. This sub-hypothesis stated that, among urban community college

students, higher levels of faculty validation sub-constructs predict a stronger intent to persist in

college. An overall R square for the model of .256, significant at the p < .01 level, indicated that a

modest fit had been obtained. Two of the faculty validation components significantly, and almost

equally, predicted students' intent to return to college for the subsequent semester. The strongest

predictor was the *mentoring* sub-construct (beta = .215, p < .05); the other significant predictor

was *students known and valued* (beta = .213, p < .05).

Hypothesis 4. This hypothesis stated that, among urban community college students,

higher levels of integration or competent membership in the college predict a stronger intent to

persist in college. An overall R square for the model of .293, significant at the p < .01 level,

indicated that a modest fit had been obtained.

Hypothesis 5. This hypothesis stated that the effect of faculty validation on intent to

persist is indirect and mediated by students' sense of integration or competent membership in the

college. To assess this, a multiple regression analysis was performed in which faculty validation

and integration entered as independent variables and intent to persist as the dependent variable.

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, were the relative values of the betas

for faculty validation and competent membership. Within the context of this model, competent

membership garnered a significant beta value (beta = .334, p = .004), while the beta for faculty

validation was non-significant (beta = .074, p = .520). The findings related to Hypotheses 3 and 4

indicated that faculty validation and competent membership each significantly predicted intent to

persist. When they were both used as independent variables within one regression equation,

however, only competent membership 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 model predicting intent to persist, competent membership was

found to have a direct effect, while faculty validation had an indirect effect on intent to persist, mediated by competent membership.

Conclusions and Implications

A summary of the findings of this research appears in Figure 2. Four sub-constructs of faculty validation emerged through principal components analysis, with items loading onto the following components: *students known and valued, good instruction, appreciation for diversity, and mentoring*. After controlling for students' age, gender, race/ethnicity, mothers' education, number of credits taken in the semester (part/full time status) and college GPA, faculty validation was found to strongly predict students' sense of integration; each of the sub-constructs of faculty validation predicted student integration at a moderate to strong level, with *good instruction* the strongest predictor. Faculty validation modestly predicted students' intent to persist; as well, two sub-constructs of faculty validation significantly predicted intent to persist—*students known and valued* and *mentoring*. Student integration modestly predicted intent to persist. Faculty validation's effect upon intent to persist was indirect, mediated through students' sense of integration.
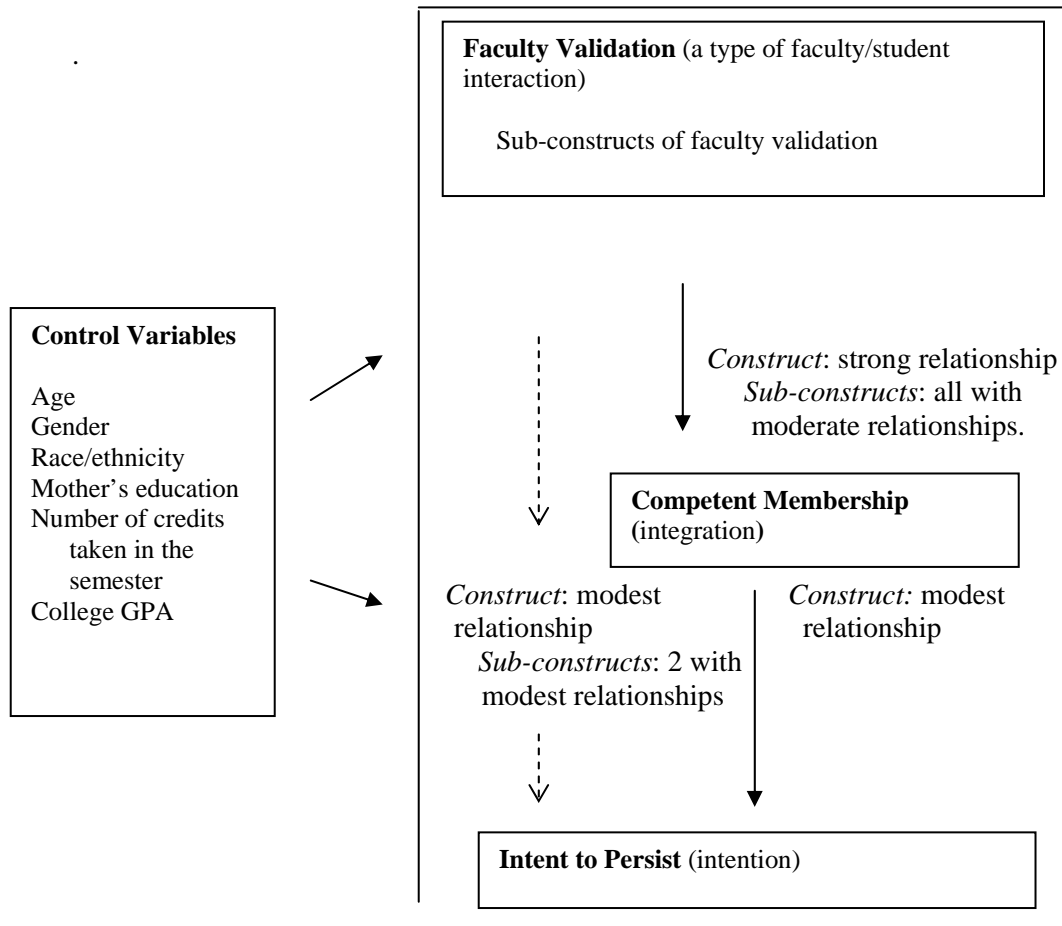
Figure 2. Conceptual framework for the current research including significant relationships found.
Note. Solid arrows indicate direct relationships; dashed arrows indicate indirect relationships.

Contributions to theory emerging from this research were as follows:

1. Empirical support was found for Rendon's (1994, 2002) proposition that validation influences student persistence in college.

2. Tinto's (1993) interactionalist theory of student departure was elaborated upon and two of the theory's propositions were empirically tested. This contributed to a better understanding of, and empirical support for aspects of Tinto's model.

3. The term *integration* is widely and divergently used. In this research it was defined and operationalized in alignment with one definition offered by Tinto (1993), an approach

which yielded significant findings regarding its ability to predict intent to persist in college.

4. Sub-constructs of faculty validation were revealed, leading to a better understanding of the meaning of this construct.

5. The study contributed to a better understanding of predictors of persistence among non-traditional and underserved students.

Implications for practice and further research are as follows:

1. Validation by faculty significantly predicted students' sense of integration and their intent to persist in college. Active institutional efforts to increase the validation of students by faculty may contribute to increased student persistence.

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 effort to, for example, encourage 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. Institutional efforts to encourage faculty to validate students can include (a) incentives, (b) professional development on the importance of, and approaches to, validation of students, and/or (c) redefining of 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 non-traditional and underserved college students through active validation.

5. Because non-traditional and underserved students interface with colleges primarily in the classroom, efforts to influence their persistence in the classroom may be more fruitful than the creation of add-on programs.

6. Further research is needed on the influence of validation on student experiences and outcomes in other settings and with other populations. In addition, action research in which interventions are implemented and their impact measured is recommended.

In some of his earlier work, Tinto (1982) stated, "Simply put, the more time faculty give to their students…the more likely are students to complete their educations." (p. 697). Despite this, his work and that of other researchers has focused predominantly on other kinds of influences on college student persistence, and there has been little evidence that classroom-based actions of faculty influence students' departure decisions. This dissertation research yielded findings indicating that faculty/student interaction involving validation of the type described by Rendon (1994, 2002) and others influences students' sense of integration, and that integration, in turn, influences their intent to persist.

References

ACT (2005). Retaining students. In *Information for Postsecondary Educators.* Retrieved January 2, 2006 from http://www.act.org/path/postsec/retain.html

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

American Association of Community Colleges. (2000). *National profile of community colleges: Trends and statistics* (3rd ed.). Washington, DC: Community College Press.

American Association of Community Colleges. (2005). *Faces of the future survey.* Washington, DC: Author.

American College Testing Service. (2001). News release. Retrieved March 14, 2003, from http://www.act.org/news/releases/2001/04-26-01.html

Astin, A. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*, 297-308.

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

Astin, A. (1996). Studying college impact. In F. Stage, G. Anaya, J. Bean, D. Hossler, & G. Kuh, (Vol. Eds.), *ASHE reader series: College students: The evolving nature of research* (pp.66-79). Needham Heights, MA: Simon & Schuster Custom Publishing.

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

Babbie, E. R. (1973). *Survey research methods.* Belmont, CA: Wadsworth Publishing Company, Inc.

Bailey, T. R. (2005). *Outcomes of community college students.* Unpublished paper presented at a seminar of the Community College Research Center, Teachers College, New York, NY.

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.

Barefoot, B. O. (2000, January/February). The first year experience: Are we making it any better? [Electronic version]. *About Campus*.

Barnett, E. (2004). *Validation experiences in high school and college among current community college students.* Unpublished class paper. Champaign, IL: University of Illinois at Urbana-Champaign**.**

Barnett, E., Crifield, M. J., Dolske, C., Ryan, K., & Sunderman, J. (2003). *Early college validating experiences and engagement in college freshmen.* Unpublished class paper. Champaign, IL: University of Illinois at Urbana-Champaign.

Barton, P. E. (2002). *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.

Bok, D. (2005, December 18). Are colleges failing? Higher ed needs new lesson plans. *Boston Globe.* Retrieved April 5, 2006 from http://www.boston.com/news/education/higher/articles/2005/12/18/

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

Braxton, J. P., & Hirschy, A. S. (2005). Theoretical developments in college student departure. In A. Seidman (Ed.). *College Student Retention: Formula for student success.* Westport, CN: Praeger Publishers.

Braxton, J. P., & Lien, L. A. (2002). The viability of academic integration. In J. M. Braxton (Ed.). *Reworking the student departure puzzle.* Nashville, TN: Vanderbilt University Press.

Braxton, J. M., Milem, J. F., & Sullivan, A. S. (2000). The influence of active learning on the college student departure process [Electronic version]. *The Journal of Higher Education, 71,* 569-90.

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.

Cabrera, A. F., Castaneda, M. B., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *The Journal of Higher Education, 63,* 143-164.

Callan, P. M., & Finney, J. E. (2003). *Multiple pathways and state policy: Toward education and training beyond high school.* Boston, MA: Jobs for the Future.

Camara, W. J. (2003). *College persistence, graduation, and remediation* (Research Summary RS-09). Princeton, NJ: The College Board, Office of Research and Development.

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

Carey, K. (2005). *One step from the finish line: Higher college graduation rates are within our reach* (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.

Carnevale, A. P., & Fry, R. A. (2000). *Crossing the great divide: Can we achieve equity when Generation Y goes to college* (Report in ETS Leadership Series). Princeton, NJ: Educational Testing Service.

Center for Postsecondary Research and Planning, Indiana University. (1998). *College student experiences questionnaire (CSEQ).* Bloomington, IN: Author.

Center for Postsecondary Research and Planning, Indiana University. (2003). *National Survey of Student Engagement.* Bloomington, IN: Author.

Chang, J. C. (2005). Faculty-student interaction at the community college: A focus on students of color. *Research in Higher Education, 46*(7), 769-802.

Choy, S. (2002). *Nontraditional undergraduates: Findings from the condition of education 2002* (Report). Washington, DC: National Center for Education Statistics.

Clark, B. (1960). The "cooling-out" function in higher education. *American Journal of Sociology, 65,* 569-576.

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

Cohen, J., & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioral sciences.* Hillsdale, NJ: Laurence Erlbaum Associates.

Community College Survey of Student Engagement, University of Texas. (2005). *Community college survey of student engagement (CCSSE).* Austin, TX: Author.

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.

Costello, A. B., & Osborne, J. W. (July 2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis [Electronic version]. *Practical Assessment, Research & Evaluation, 10*(7).

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.

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.

Dandridge-Rice, R. C. (2003). The applicability of Rendon's model of validation with African-American community college students. (Masters Thesis, California State University*). Dissertation Abstracts International,* MAI 42/02.

Daniels, D. S. (1997). *Impact of environmental variables on community college dental assisting students who are at-risk for persistence.* Unpublished doctoral dissertation. 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.

Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method* (2nd ed). New York: John Wiley & Sons, Inc.

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

Education Commission of the States. (n.d.). *Accountability*. Retrieved March 17, 2003 from http://www.ecs.org/ecsmain.asp?page=/search/default.asp

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

Fink, A. (1995). *How to design surveys.* Thousand Oaks, CA: Sage Publications.

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.

Friedman, D. B., & Hoffman-Goetz. L. (2006). A systematic review of readability and comprehension instruments used for print and web-based cancer information. *Health Education & Behavior, 33*(3), 352-373.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction, 6th edition.* White Plains, NY: Longman Publishers.

Garson, G. D. (1998). *Multiple regression* [instructional website]. Retrieved September 10, 2006 from http://www2.chass.ncsu.edu/garson/PA765/regress.htm#dummy

Glater, J. D. (2006, February 21). To: professor@university.edu: Subject: Why it's all about me. *New York Times,* p. A1, A14.

Green, D. O. (2006). Historically underserved students: What we know, what we still need to know. In D. D. Bragg and E. A. Barnett (Eds.). *New Directions in the Community College, 135,* 21-28. San Francisco: Jossey-Bass, Inc.

Grubb, W. N. (1999a). *Honored but invisible: An inside look at teaching in community colleges.* New York: Routledge.

Grubb, W. N. (1999b). *The economic benefits of pre-baccalaureate education: Results from state and local studies* (CCRC Brief, Number 3). New York: Teachers College, Columbia University.

Guadagnoli, E., & Velicer. W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin, 103*(2), 265-275.

Hagedorn, L. S., Maxwell, W., Rodriguez, P., Hocevar, D., & Fillpot, J. (2000). Peer and student-faculty relations in community colleges. *Community College Journal of Research and Practice, 24,* 587-598.

Harris, S. M., & Nettles, M. T. (1996). Ensuring campus climates that embrace diversity. In L. I. Rendon, & R. Hope (Eds.) *Educating a new majority: Transforming American's educational system for diversity* (pp. 330-371). San Francisco: Jossey-Bass, Inc.

Higher Education Research Institute, UCLA. (2003). *Cooperative institutional research program (CIRP) freshman survey.* Los Angeles: Author.

Higher Education Research Institute, UCLA. (2005, October 28). 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.

Hossler, D., Schmit, J., & Vesper, N. (1999). *Going to college: How social, economic, and educational factors influence the decisions students make.* Baltimore, MD: The John Hopkins University Press.

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.

Institute for Education Statistics. (2006). *Student effort and educational progress [tables].* Retrieved October 14, 2006 from http://nces.ed.gov/programs/coe/2003/section3/tables/t23_3.asp

Institute for Higher Education Policy. (1999). The tuition puzzle: Putting the pieces together. In J. L. Yeager, G. M. Nelson, E. A Potter, J. C Weidman & T. G. Zullo (Eds.), *ASHE Reader on Finance in Higher Education.* Boston, MA: Pearson Custom Publishing.

Jaccard, J., & Turrisi, R. (2003). *Interaction effects in multiple regression* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Jaeger, R. M. (1993). *Statistics: A spectator sport* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Jalomo, R. (1995). *Latino students in transition: An analysis of the first-year experience in the community college.* Unpublished doctoral dissertation, Arizona State University, Tempe.

Jalomo, R. (2001). Institutional policies that promote persistence among first-year community college students. In B. K. Townsend & S. B. Twombly (Eds.). *Community colleges: Policy in the future context.* Westport, CN: Ablex Publishing.

Johnson, D. W., Johnson, R. T., Buckman, L. A., & Richards, P. S. (1985). The effect of prolonged implementation of cooperative learning on social support within the classroom. *The Journal of Psychology, 119*(5), 405-411.

Johnson, J. L. (1997). Commuter college students: What factors determine who will persist and who will drop out? *College Student Journal, 31,* 323-332.

Karabel, J. (1986). Community colleges and social stratification in the 1980s. In L. S. Zwerling (Ed.), *The community college and its critics* (New Directions for Community Colleges No. 54). San Francisco: Jossey-Bass.

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

Kraemer, B. A. (1997). The academic and social integration of Hispanic students into college. *The Review of Higher Education, 20*(2), 163-179.

Krathwohl, D. R. (1998). *Methods of educational and social science research: An integrated approach (2nd ed.).* New York: Addison-Wesley Educational Publishers, Inc.

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.

Kuh, G. D. (2003). What we are learning about student engagement from NSSE. *Change, 35*, 24-32.

Kuh, G. D., & Hu, S. (2001). The effects of student-faculty interaction in the 1990s. *The Review of Higher Education, 24*(3), 309-332.

Kuh, G. D., Schuh, J. H., Whitt, E. J., & Associate's. (1991). *Involving colleges: Successful approaches to fostering student learning and development outside the classroom.* San Francisco: Jossey-Bass Inc.

Lamport, M. A. (1993). Student-faculty informal interaction and the effect on college student outcomes: A review of the literature. *Adolescence, 28*(112), 971-990.

Litwin, M. S. (1995). *How to measure survey reliability and validity.* Thousand Oaks, CA: Sage Publications.

Lundquist, C., Spalding, R. J., & Landrum, R. E. (2002). College student's thoughts about leaving the university: the impact of faculty attitudes and behaviors. *Journal of College Students Retention, 4*(2), 123-133.

Marti, C. N. (2005). *Dimensions of student engagement in American community colleges: Using the community college student research report in research and practice.* Manuscript submitted for publication.

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

McClenney, K. M. (2004). Keeping America's promise: Challenges for community colleges. *Keeping America's promise: A report on the future of the community college* (Report). Denver, CO: Education Commission of the States.

Mendenhall, W., Ott, L., & Scheaffer, R. L. (1971). *Elementary survey sampling.* Belmont, CA: Wadsworth Publishing Company, Inc.

Mertens, D. M. (1998). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches.* Thousand Oaks, CA: Sage Publications.

Messick, S. (1995). Validity of psychological assessment: Validation of inferences from person's responses and performances as scientific inquiry into score meaning. *American Psychologist, 50*(9), 741-749.

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

Napoli, A. R., & Wortman, P. M. (1998). Psychosocial factors related to retention and early departure of 2-year community college students. *Research in Higher Education, 39,* 419-455.

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

National Center for Education Statistics. (2005). *IPEDS College Opportunities On-Line.* (Statistical Analysis Report). Retrieved April 19, 2005 from http://nces.ed.gov/ipeds/coll/GRS.asp

Noel, Levitz. (2000). *Student satisfaction inventory.* Iowa City, IA: Author.

Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students in college. *The Journal of Higher Education, 67,* 119-148.

Nora, A., Attinasi, L. C., & Matonak, A. (1996). Testing qualitative indicators of precollege factors in Tinto's attrition model: A community college student population. In F. Stage, G. Anaya, J. Bean, D. Hossler, & G. Kuh, (Vol. Eds.), *ASHE reader series: College students: The evolving nature of research* (pp.174-191). Needham Heights, MA: Simon & Schuster Custom Publishing.

Okun, M. A., Benin, M., & Brandt-Williams, A. (1993). Staying in college: Moderators of the relation between intention and institutional departure. *Journal of Higher Education, 67,* 577-560.

Orr, M. T., & Bragg, D. D. (2001). Policy directions for K-14 education—Looking to the future. In B. K. Townsend & S. B. Twombly (Eds.) *Community colleges: Policy in the future context.* Westport, CN: Ablex Publishing.

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

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research.* San Francisco: Jossey-Bass Inc.

Pascarella, E. T., & Terenzini, P. T. (1998). Studying college students in the 21st century: Meeting new challenges. *The Review of Higher Education, 21,* 151-165.

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

Pascarella, E. T., Terenzini, P. T., & Hibel, J. (1978). Student-faculty interactional settings and their relationship to predicted academic performance. *Journal of Higher Education, 49*(5), 450-463.

Pascarella, E. T., Edison, M., Hagedorn, L., Nora, A., & Terenzini, P. (1996). Influences on students' internal locus of attribution for academic success in the first year of college. *Research in Higher Education, 37,* 731-756.

Paulsen, M. B., & St. John, E. P. (2002). Social class and college costs: Examining the financial nexus between college choice and persistence. *Journal of Higher Education, 73,* 189-236.

Pennington, H. (2003). Building one system for youth development and opportunity. *Shaping the future of American youth: Youth Policy in the 21st Century* (Report). Washington, DC: American Youth Policy Forum.

Peterson, R. A. (2000). *Constructing effective questionnaires.* Thousand Oaks, CA: Sage Publications.

Phillippe, K. A., & Patton, M. (2000). *National profile of community colleges: Trends and statistics* (3rd ed.). Washington, DC: Community College Press.

Pincus, R. (1980). The false promises of community college: Class conflict and vocational education. *Harvard Educational Review, 50,* 332-361.

Pope, R. L., & Mueller, J. A. (2000). Development and initial validation of the multicultural competence in student affairs-preliminary 2 scale. *Journal of College Student Development, 41*(6), 599-608.

Preacher, K. J., & MacCallum, R. C. (2003). Repairing Tom Swift's electric factor analysis machine. *Understanding Statistics, 2,* 13-43.

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.

Reitano, J. (1999). CUNY's community colleges: Democratic education on trial. *New Directions for Community College, 107,* 23-40.

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

Rendon, L. (2002) Community college Puente: A validating model of education. *Educational Policy, 16,* 642- 667.

Rendon, L. I. & Garza, H. (1996). Closing the gap between two- and four-year institutions. In L. I. Rendon & R. O. Hope (Eds.), *Educating a new majority: Transforming American's educational system for diversity* (pp. 289-307). San Francisco: Jossey-Bass Publishers.

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.

Rosenbaum, J. E. (2002). *Beyond empty promises: Policies to improve transitions into college and jobs.* Washington, DC: Office of Vocational and Adult Education, US Department of Education.

Rummel, R. J. (n.d.). *Understanding factor analysis.* Retrieved June 17, 2004 from http://www.hawaii.edu/powerfills/UFA.HTM

Ruppert, S. S. (2003). *Closing the college participation gap: A national summary.* Denver, CO: Education Commission for the States.

Saxon, D. P., & Boylan, H. R. (n.d.). *Research and issues regarding the cost of remedial education in higher education.* National Center for Developmental Education. Retrieved November 24, 2002 from http://www.ncde.appstate.edu/resere%20reading/mcCabe%20Costs.htm

Schaad, D. D. (1997). *The social and academic integration of community college students participating in a freshman learning community.* Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.

Schmit, C., & Abell, P. (2003). Demographic risk factors, study patterns, and campus involvement as related to student success among Guilford Technical Community College students. *Community College Review, 31*, 1-16.

Schuetz, P. (2004). *Characterizing the impact of institutional factors on community college student persistence.* Paper presented at the meeting of the Council for the Study of Community Colleges, Minneapolis, MN.

Shannon, D. M., & Davenport, M. A. (2000). *Using SPSS to solve statistical problems: A self-instruction guide.* Upper Saddle River, NJ: Prentice Hall, Inc.

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.

Spann, M. G. (2000). *Remediation: A must for the 21st century learning society* (Policy Paper). Denver, CO: Education Commission of the States.

Steiner, L. M., Hassel, B. C., & Tepper, S. J. (2004). *Measuring higher education: A compendium of assessment instruments for colleges and universities.* New York: Teagle Foundation.

Stovall, M. L. (1999). *Relationships between participation in a community college student success course and academic performance and persistence.* Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign.

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.

Sudman, S. (1976). *Applied sampling.* New York: Academic Press, Inc.

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

Suskie, L. A. (1996). *Questionnaire survey research: What works.* Tallahassee, FL: Association for Institutional Research.

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. (1982). Limits of theory and practice in student attrition. *Journal of Higher Education, 53*(6), 687-700.

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

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

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

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

Tinto, V. (2005). Epilogue: Moving from theory to action. In A. Seidman (Ed.). *College Student Retention: Formula for Success.* Westport, CN: Praeger Publishers.

Von Eye, A., & Schuster, C. (1998). *Regression analysis for the social sciences.* San Diego, CA: Academic Press.

Wetzel, J. N., O'Toole, & Peterson, S. (1999). Factors affecting student retention probabilities: A case study. *Journal of Economics and Finance, 23*, 45-55.

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

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.

COLLEGE EXPERIENCE SURVEY

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.

When I think about the classes I have taken at this college, I would say that……	CIRCLE THE ONE ANSWER THAT FITS BEST:						
	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
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
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

When I think about the classes I have taken at this college, I would say that……	CIRCLE THE ONE ANSWER THAT FITS BEST:						
	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
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

When I think about this college in general, I would say that….	CIRCLE THE ONE ANSWER THAT FITS BEST:						
	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
34. I feel a sense of belonging to the campus community.	1	2	3	4	5	6	7

When I think about this college in general, I would say that….	CIRCLE THE ONE ANSWER THAT FITS BEST:						
	Very strongly disagree	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Very strongly agree
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

In your experiences at this college, how often have you done each of the following:	CIRCLE THE ONE ANSWER THAT FITS BEST:			
	Very often	Often	Sometimes	Never
Used e-mail to communicate with an instructor	1	2	3	4
Discussed grades or assignments with an instructor	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)*   *(phone number)*

    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 Associates Degree……………………………. ___   ___
        Earned a Bachelors 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!!